

**SCREENING AND ASSESSMENT OF  
CO-OCCURRING DISORDERS  
IN THE JUSTICE SYSTEM**

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# Table of Contents

|   |    |
|---|----|
| I. Overview . . . . .   | 1  |
| Significance of Co-Occurring Disorders in the Justice System . . . . .  | 1  |
| Which Individuals in the Justice System are at Greatest Risk<br>for Co-Occurring Disorders . . . . .                              | 2  |
| What are the Effects of Co-Occurring Disorders on Treatment . . . . .   | 2  |
| Importance of Screening, Diagnosis, and Assessment . . . . .  | 4  |
| II. Defining Screening, Diagnosis, and Assessment of Mental Health and Substance Use<br>Disorders in the Justice System . . . . . | 5  |
| What are the Differences Between Screening, Diagnosis, and Assessment . . . . .   | 5  |
| Screening . . . . .   | 5  |
| Diagnosis . . . . .   | 5  |
| Assessment . . . . .  | 6  |
| At What Stage in the Justice System Should Screening be Conducted . . . . .   | 6  |
| Key Points . . . . .  | 6  |
| Threats to Accurate Screening, Diagnosis, and Assessment . . . . .  | 7  |
| III. Gathering the Right Information in Screening for Co-Occurring Disorders . . . . .  | 9  |
| Important Signs and Symptoms of Co-Occurring Disorders . . . . .  | 9  |
| What Information Should be Included in Screening for<br>Co-Occurring Disorders in the Justice System . . . . .                    | 9  |
| Criminal Justice . . . . .  | 10 |
| Mental Health . . . . .   | 10 |
| Substance Abuse . . . . .   | 10 |
| Interaction Effects of Co-Occurring Disorders . . . . .   | 11 |
| Other Indicators . . . . .  | 11 |
| Screening for Suicide . . . . .   | 11 |
| Key Points . . . . .  | 11 |
| Useful Questions to Ask in Suicide Screening . . . . .  | 12 |

|   |    |
|---|----|
| Screening for Motivation and Readiness for Treatment . . . . .                                  | 12 |
| Stages of Change . . . . .  | 12 |
| Key Principles in Screening for Motivation and Readiness for Treatment . . .                    | 13 |
| Useful Questions to Ask in Screening for Motivation and<br>Readiness for Treatment . . . . .    | 14 |
| Use of Self-Report and Collateral Information . . . . .   | 14 |
| Limitations of Self-Report Information . . . . .  | 15 |
| Strategies to Enhance the Accuracy of Self-Report Information . . . . .                         | 16 |
| IV. Key Clinical Issues . . . . .   | 19 |
| Understanding the Complicated Symptom Presentation . . . . .                                    | 19 |
| Types of Symptom Interaction . . . . .  | 19 |
| Examples of Symptom Interaction . . . . .   | 20 |
| Precipitation of Symptoms or Disorders . . . . .  | 20 |
| Exacerbation of Symptoms . . . . .  | 20 |
| Mimicking . . . . .   | 21 |
| Masking . . . . .   | 22 |
| Drug Testing . . . . .  | 22 |
| Who Should Receive Drug Testing . . . . .   | 22 |
| When Should Drug Testing be Provided . . . . .  | 23 |
| What Drug Testing Procedures Should be Followed . . . . .                                       | 23 |
| Providing an Extended Baseline for Screening, Diagnosis and Assessment . . . . .                | 24 |
| Why Should an Extended Baseline be Provided . . . . .   | 24 |
| What Steps Should be Taken to Provide an Extended Baseline . . . . .                            | 24 |
| Strategies to Consider During the Extended Baseline . . . . .                                   | 25 |
| How Long Does it Take for Symptoms to Clarify . . . . .   | 26 |
| Should a Distinction be Made Between ‘Primary’ and ‘Secondary’ Disorders . . . . .              | 26 |
| Staff Training . . . . .  | 27 |
| V. Selecting Screening Instruments for Co-Occurring Disorders . . . . .                         | 28 |
| What Combination of Instruments Should be Used to Screen for<br>Co-Occurring Disorders. . . . . | 28 |
| Mental Health Screening Instruments . . . . .   | 29 |
| Beck Depression Inventory (BDI) . . . . .   | 29 |

|  |    |
|--|----|
| Brief Symptom Inventory (BSI)  | 30 |
| General Behavior Inventory (GBI)   | 31 |
| Hamilton Depression Scale (HAM-D)  | 31 |
| Referral Decision Scale (RDS)  | 32 |
| Symptom Checklist 90 - Revised (SCL-90-R)  | 32 |
| Substance Abuse Screening Instruments  | 33 |
| Alcohol Dependence Scale (ADS)   | 34 |
| Addiction Severity Index (ASI)   | 35 |
| Alcohol Use Disorders Identification Test (AUDIT)                                  | 36 |
| CAGE   | 37 |
| Drug Abuse Screening Test (DAST-20)  | 38 |
| Michigan Alcoholism Screening Test (MAST)  | 39 |
| Substance Abuse Subtle Screening Inventory (SASSI-2)                               | 40 |
| Simple Screening Instrument (SSI)  | 41 |
| TCU Drug Dependence Screen (DDS)   | 42 |
| Motivational Screening Instruments   | 43 |
| Circumstances, Motivation, Readiness, and Suitability Scale (CMRS)                 | 43 |
| Stages of Change Readiness and Treatment Eagerness Scale (SOCRATES)                | 44 |
| University of Rhode Island Change Assessment Scale (URICA)                         | 45 |
| Screening for Attention-Deficit/Hyperactivity Disorder (ADHD)                      | 46 |
| Childhood Symptom Checklist  | 46 |
| VI. Selecting Diagnostic Instruments for Co-Occurring Disorders                    | 47 |
| Diagnostic Instruments   | 47 |
| DIS (Diagnostic Interview Schedule)  | 47 |
| Structured Clinical Interview for DSM-IV - Patient Version (SCID-IV)               | 48 |
| Scheduled for Affective Disorders and Schizophrenia -<br>Lifetime Version (SADS-L) | 49 |
| VII. Assessment of Co-Occurring Disorders  | 50 |
| What Information Should be Included in an Assessment of<br>Co-Occurring Disorders  | 50 |
| What Areas Should be Assessed in More Detail                                       | 51 |
| Symptoms of Co-Occurring Disorders   | 51 |
| Substance Abuse History and Status   | 51 |
| Mental Health History and Status   | 51 |

|   |    |
|---|----|
| History of Interaction Between Co-Occurring Disorders . . . . .                                 | 51 |
| Social Relationships . . . . .  | 52 |
| Medical/Health Care History and Status . . . . .  | 52 |
| Criminal Justice History and Status . . . . .   | 52 |
| What Instruments are Available for Assessment of Co-Occurring Disorders . . . . .               | 52 |
| What Combination of Instruments Should be Used to Assess for<br>Co-Occurring Disorders. . . . . | 53 |
| Mental Health Assessment Instruments . . . . .  | 53 |
| Minnesota Multiphasic Personality Inventory (MMPI-2) . . . . .                                  | 53 |
| Millon Clinical Multiaxial Inventory (MCMI-III) . . . . .                                       | 54 |
| Personality Assessment Inventory (PAI) . . . . .  | 55 |
| Substance Abuse Assessment Instruments . . . . .  | 55 |
| Addiction Severity Index (ASI) . . . . .  | 55 |
| Individual Assessment Profile (IAP) . . . . .   | 55 |
| VIII. Assessment of Criminal Justice Information . . . . .                                      | 56 |
| What Types of Criminal Justice Information Should Be Assessed . . . . .                         | 56 |
| Criminal History . . . . .  | 56 |
| Current Criminal Justice Status . . . . .   | 56 |
| Key Considerations in Assessing Criminal Justice Information . . . . .                          | 57 |
| IX. Summary . . . . .   | 58 |
| X. References . . . . .   | 60 |

# **I. Overview**

## **Significance of Co-Occurring Disorders in the Justice System**

Significant numbers of individuals with co-occurring mental health and substance use disorders have been detected in mental health and alcohol or drug substance abuse treatment settings. For example, as many as 70% of individuals treated for substance abuse have a lifetime history of depression (Mirin, Weiss, & Michael, 1988). According to the Epidemiological Catchment Area (ECA) study, individuals with either a mental health or substance use disorder are more likely to have a co-occurring disorder (Regier, et al., 1990). The ECA study found that 23%-56% of individuals with a diagnosable Axis I mental disorder also have a substance abuse or dependence disorder (Regier et al., 1990).

When examining criminal justice populations, rates of both mental health disorders and substance use disorders are significantly higher than those detected in the general population (Keith, Regier, & Rae, 1992; Weissman, Bruce, Leaf, Floria, & Holzer, 1992; Robins & Regier, 1991). For example, rates of mental health disorders are four times higher among prisoners than in the general population, and rates of substance use are four to seven times higher (Robins & Regier, 1991). An estimated 3-11% of individuals in correctional settings have co-occurring mental health and substance use disorders (Peters & Hills, 1993). Rates of co-occurring disorders among criminal justice populations exceed those found in the general population, and are particularly high among those diagnosed with bipolar disorder and schizophrenia. As an example, all inmates with schizophrenia who were examined in one study were given a diagnosis of drug or alcohol abuse or dependence (Chiles et al., 1990).

Individuals with co-occurring disorders are characterized by significant heterogeneity (Lehman, 1996). This heterogeneity is reflected in the latest formulation of the Diagnostic and Statistical Manual (DSM) of Mental Disorders (Fourth Edition; American Psychiatric Association, 1994), which now differentiates between mental health disorders and a range of other "substance-induced" mental health disorders. Several different combinations of commonly occurring mental health and substance use disorders are described in Appendix A. As reflected in the Appendix, the current discussion will primarily focus on co-occurring psychotic, depressive, and bipolar disorders, which represent the major mental health disorders treated in 'dual diagnosis' programs. Concurrent mental retardation or personality disorders are not discussed extensively here, although these are also commonly found among justice populations. Each combination of co-occurring disorders is characterized by differences in the following areas:

- Prevalence rates of the disorders.
- Primary drugs of choice.
- Etiology and history of the disorders.
- History of institutionalization.

- Symptoms (including interactive effects of substance abuse and mental health disorders).
- Areas of functional impairment (e.g. cognitive functioning, interpersonal skills).
- Level of social support.
- Course of the disorders and of treatment.
- Prior involvement with the criminal justice system.
- History of aggressive and violent behavior.
- Ability to function independently in a jail, prison, or community supervision setting.

### **Which Individuals in the Justice System are at Greatest Risk for Co-Occurring Disorders?**

There are several characteristics of individuals who are particularly vulnerable to co-occurring disorders (Drake, Rosenberg, & Mueser, 1996; Lehman and Dixon, 1995; Mueser, Bennett, and Kushner, 1995). Individuals in the criminal justice system who have several of these characteristics should be carefully screened for co-occurring disorders. As more of these characteristics are observed, there is a greater likelihood of co-occurring disorders, and a corresponding need for more detailed mental health and substance abuse screening. Among individuals with mental illness, these risk factors include the following:

- Males.
- Youthful offenders.
- Low educational level.
- History of unstable housing or homelessness.
- History of legal difficulties and/or incarceration.
- Suicidality.
- History of emergency room or acute care visits.
- High rates of relapse to substance abuse.
- Peers/associates who are drug users or who have antisocial features.
- Poor relationships with family members.
- Family history of substance use and/or mental health disorders.
- Poor adherence to treatment.
- Disruptive behavior.

### **What are the Effects of Co-Occurring Disorders on Treatment?**

The presence of co-occurring disorders is associated with compromised psychosocial functioning and a range of negative treatment outcomes (Osher & Drake, 1996). Key characteristics of co-occurring disorders that often affect involvement in treatment include the following:



- Jail inmates with co-occurring disorders have more pronounced difficulties in employment, family, and social relationships, have more serious medical problems, and have lower levels of relapse prevention skills and knowledge of substance abuse treatment principles, in comparison to other inmates with substance use disorders (Peters, et al., 1992).
- Jail inmates with co-occurring disorders are nearly twice as likely than other inmates to be terminated from substance abuse treatment programs, and are more likely than other inmates to leave these programs prematurely (Tunis, Austin, Morris, et al., 1996).
- More rapid progression from initial drug use to drug dependence (Weiss, Mirin, Griffin, & Michael, 1988).
- More frequent hospitalization (Brady et al., 1990; Hills, 1994; Safer, 1987; Seibel et al., 1993).
- Poor prognosis for completion of treatment (Siddal & Conway, 1988; Zuckerman, Sala, Masters, & Angelone, 1975).
- Noncompliance with medication and treatment interventions (Drake, Osher, & Wallach, 1989; Osher et al., 1994).
- Higher rates of depression and suicide (Bartels, Drake, & McHugo, 1992; Caton, 1981).
- Individuals with co-occurring disorders do not fit well into existing treatment programs (Carey, 1991). Once involved in treatment, these individuals do not respond as well as others with single diagnoses (Bowers, Mazouze, Nelson, & Jatlow, 1990), and are more likely to attend outpatient treatment irregularly (Hall, Popkin, DeVaul, and Stickney, 1977) and to terminate prematurely from treatment (Hall et al., 1977).
- Co-occurring disorders are also associated with other negative psychosocial outcomes, including poor social functioning (Evans & Sullivan, 1990; lower satisfaction with relationships (Dixon, McNary, & Lehman, 1995; homelessness (Osher et al., 1994), violence (Cuffel, Shumway, & Chouljian, 1994; Monahan, 1995), and incarceration (Abram & Teplin, 1991).

## **Importance of Screening, Diagnosis, and Assessment**

Screening, diagnosis, and assessment are all important in compiling information regarding individuals with co-occurring disorders in the justice system. These complementary activities assist in identification, triage, and treatment of individuals in the criminal justice system. Mental health and substance use disorders are often underdiagnosed in criminal justice settings (Peters, 1992; Teplin, 1983; 1991), and other treatment settings (Drake, Osher, Noordsy, Hurlbut, Teague, & Beaudett, 1990; Drake, Rosenberg, & Mueser, 1996) leading to misdiagnosis, overtreatment of mental health symptoms with medications, neglect of appropriate interventions, inappropriate treatment planning and referral, and poor treatment outcomes (Drake et al., 1993; Galletly, Field, and Prior, 1993; Hall et al., 1978; Teague et al., 1990). There are several reasons for the nondetection of mental health and substance use disorders within the justice system. These include negative consequences associated with disclosure of symptoms, lack of staff training in diagnosis and management of mental health disorders, symptom interaction between co-occurring disorders, and cognitive and perceptual difficulties associated with severe mental illness or toxic effects of recent alcohol or drug use.

The tradition in mental health, substance abuse, and criminal justice systems has been to independently conduct screening, diagnosis, and assessment, often with inadequate sharing of information between the systems. This has resulted in nondetection of mental health and substance use disorders, poor communication regarding overlapping areas of interest, and failure to develop integrated service goals which would benefit the mental health treatment, substance abuse treatment, and criminal justice systems. Staff from mental health, substance abuse, and criminal justice systems need to become comfortable in identifying the symptoms of these disorders and participating collaboratively in screening, diagnosis, and assessment. Collaboration between systems may reduce repetitive screening and assessment.

Integrated screening, diagnosis, and assessment approaches should be developed in criminal justice settings that consider critical indicators of mental health and substance abuse problems, and that also examine key criminal justice information. Integrated screening and assessment approaches are associated with more favorable outcomes (Kofoed et al., 1986). Single instruments have not been developed to screen or assess co-occurring disorders either inside or outside the criminal justice system. As a result, it may be useful to combine specialized mental health and substance abuse instruments for purposes of screening and assessment.

## **II. Defining Screening, Diagnosis, and Assessment of Mental Health and Substance Use Disorders in the Justice System**

### **What are the Differences between Screening, Diagnosis, and Assessment?**

#### **Screening**

Screening is provided to detect the presence of mental health and substance use disorders, related problem areas, and other indicators that reflect the need for involvement in treatment. Diagnosis and assessment provide a more detailed description of types of disorders detected and related psychosocial problems, and contribute directly to the development of a treatment plan. Screening may involve an interview and/or administration of specialized instruments (e.g. questionnaires). Screening is conducted early in the process of compiling information, and typically precedes diagnosis and assessment (Drake & Mercer-McFadden, 1995).

Goals of screening include the following:

1. Detect current mental health and substance use disorders.
2. Identify individuals with a history of violent offenses/behavior or severe medical problems.
3. Identify individuals who have severe cognitive deficits.
4. Identify individuals who would not be eligible or amenable for treatment of co-occurring disorders.

#### **Diagnosis**

Diagnosis (or diagnostic classification) includes a review of symptoms related to DSM-IV (Diagnostic and Statistical Manual - Fourth Edition, American Psychiatric Association, 1994) mental health and substance use disorders. The diagnosis summarizes the pattern of current symptoms and provides hypotheses for further assessment and treatment. Diagnosis usually involves an interview, psychological, laboratory, or other types of testing, and review of archival records. Interviews of significant others may also be part of the diagnostic process. Diagnosis helps to determine whether the treatment will focus on mental health disorders, substance use disorders, or on both disorders.

Goals of diagnosis include the following:

1. Identify the presence of specific DSM-IV mental health and substance use disorders.
2. Develop hypotheses for psychosocial assessment.

## **Assessment**

Assessment provides a comprehensive examination of psychosocial needs and problems, including the severity of mental health and substance use disorders, conditions associated with the occurrence and maintenance of these disorders, other problems related to the disorders or affecting treatment, individual motivation towards treatment, and areas for treatment interventions. Assessment is conducted through interview and/or use of specialized instruments. Goals of assessment include the following:

1. Examine the scope of mental health and substance abuse problems.
2. Assess the full spectrum of psychosocial problems that may need to be addressed in treatment.
3. Provide a foundation for treatment planning.

## **At What Stage in the Justice System Should Screening be Conducted?**

A series of screenings are usually provided in jails and prisons to identify health problems, mental health disorders, substance abuse problems, vocational and educational deficits, and other needs for program services. A 'classification' screening is also conducted to identify security risks (e.g. history of escape, past aggressive behavior within the institution), to determine program needs, and to determine placement of individuals within different institutional units or facilities. Mental health and substance abuse screenings are often included within interviews conducted by pretrial services or other court-related agencies. In community corrections settings, presentence or postsentence investigations (PSI's) are frequently completed by local community corrections staff to assist in determining the judicial disposition or in case planning. PSI investigations often examine mental health and substance use issues.

Due to time constraints, screenings conducted in most criminal justice settings are quite brief. Screenings are often conducted by staff who do not have considerable experience in diagnosis or assessment of mental health or substance use disorders, and who may be unfamiliar with treatment services. Training should be provided in detecting co-occurring disorders, use of screening instruments, developing collaborative screening approaches, and initiating referral to assessment and treatment services. This is particularly important when screening staff do not have extensive clinical training. Evidence of substance abuse or mental health problems is used in most criminal justice settings to 'flag' individuals who need more extensive assessment to determine the type or intensity of specialized treatment services that will be provided.

## **Key Points**

- All individuals entering the criminal justice system should be screened for mental health and substance use disorders. Universal screenings are warranted due to the high rates of co-occurring disorders among individuals in the criminal justice system and to the negative consequences for nondetection of these disorders.

- Screening for mental health and substance abuse problems should be completed at the earliest possible point after involvement in the criminal justice system. For example, identification of these problems among pretrial defendants will assist the judge to establish conditions of release (e.g. drug testing, involvement in treatment) that will increase the likelihood of stabilization in the community and of the individual's return for additional court hearings.
- Screening for co-occurring disorders should be provided at different stages of an individual's progression through the criminal justice system, such as diversion, admission to jail, pretrial, presentencing, sentencing, probation, admission to prison, parole or aftercare, and revocation hearings. Ongoing screening opportunities will help to identify individuals who are initially reluctant to discuss mental health or substance abuse problems, but who may become more receptive to involvement in treatment services over time - for example, inmates who may seek treatment after learning more about correctional program services, or who may experience mental health symptoms while incarcerated.
- Similar or standardized screening instruments for co-occurring disorders should be used across different justice settings. This approach will promote greater awareness of co-occurring disorders and needed treatment interventions, and can reduce unnecessary repetition of screening for individuals identified as having co-occurring disorders.
- To obtain the most accurate results, screening for co-occurring disorders should be delayed until an individual reaches sobriety. This will allow for mental health symptoms to clarify, pursuant to diagnosis and potential referral for mental health services.
- Information from previously conducted screening and assessment should be communicated across different points in the criminal justice system.

### **Threats to Accurate Screening, Diagnosis, and Assessment**

It is often quite difficult to obtain accurate screening and assessment information regarding co-occurring disorders among individuals in the justice system. Accuracy of information obtained during screening and assessment can be compromised by a range of factors. As a result, screening and assessment should be conducted on an ongoing basis throughout involvement in the justice system. Screening and assessment information should follow the individual through different stages in the justice system.

Several threats to the accuracy of screening, diagnosis, and assessment include the following:

1. Inadequate staff training and poor familiarity with mental health and/or substance use disorders.

2. Time constraints in conducting screening and assessment.
3. Previous clinicians who may have avoided, or neglected to provide screening for co-occurring disorders.
4. Records are often incomplete, misleading, or may have mislabeled the cause of a particular symptom.
5. Individuals vary tremendously in their expression of co-occurring disorders.
  - Individuals with different mental health disorders often have varying patterns of substance abuse.
  - Persons with severe mental illness may be more vulnerable to even small amounts of substance use.
  - Different substances have varying short- and long-term effects. For example, dependence symptoms vary considerably according to the substance of abuse (Mueser, Bellack and Blanchard, 1992).
  - The consequences of substance use for persons with severe mental illness may look different than for other people (Drake & Mercer-McFadden, 1995).
6. Mental health and substance use disorders have a waxing and waning course and may appear in different forms at different points in time. This variability leads to many different, and often conflicting diagnoses provided over time.
7. An individual may have a temporary remission of symptoms at the time of screening or assessment, thus inhibiting detection of longstanding disorders.
8. There is considerable symptom interaction between co-occurring disorders, leading to difficulties in interpreting whether symptoms are related to mental illness or substance abuse.
9. Individuals with co-occurring disorders may have difficulty providing an accurate symptom history due to cognitive impairment, mental health symptoms, confusion regarding the effects of their substance use, and to the chronic nature of their alcohol and drug use.
10. Individuals in the criminal justice system may anticipate negative consequences related to disclosure of mental health or substance abuse symptoms.
11. Symptoms may be feigned or exaggerated if an individual believes that this will lead to more favorable placement or disposition.

### **III. Gathering the Right Information in Screening for Co-Occurring Disorders**

#### **Important Signs and Symptoms of Co-Occurring Disorders**

There are several observable signs and symptoms of mental health and substance use disorders that indicate the need for further screening and assessment (Mueser, Bellack, and Blanchard, 1992). These provide more subtle indicators that can supplement self-report and archival information used in screening. It may be useful to include a checklist of these signs and symptoms in screening for mental health and substance use disorders within the justice system. As more of these signs and symptoms are observed, there is a greater likelihood of these disorders, and a corresponding need for more detailed mental health and substance abuse screening. Key signs and symptoms of co-occurring disorders<sup>1</sup> include:

- Unusual affect, appearance, thoughts, or speech (e.g. confusion, disorientation, rapid speech).
- Suicidal thoughts or behavior.
- Paranoia.
- Impaired judgement and risk-taking behavior.
- Prescription drug seeking behavior.
- Agitation and tremors.
- Impaired motor skills (e.g. unsteady gait).
- Dilated or constricted pupils.
- Elevated or lowered vital signs.
- Hyperarousal or drowsiness.
- Muscle rigidity.
- Evidence of current intoxication (e.g. alcohol on breath).
- Needle track marks/injection sites.
- Inflamed or eroded nasal septum.
- Burns on the inside of the lips.

#### **What Information Should be Included in Screening for Co-Occurring Disorders in the Justice System?**

An integrated screening approach should be used to examine relevant criminal justice information, and to determine the presence of mental health and substance use disorders. Screening can help to determine the relationship between co-occurring disorders and prior criminal behavior, and to identify the need for criminal justice supervision. If both mental health and substance use disorders are present, one should assess the interaction of these disorders and motivation for treatment. Because of the high rates of co-occurring disorders in justice settings,

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<sup>1</sup> This is not an exhaustive list.

detection of a single disorder (i.e. either mental health or substance use) should immediately 'trigger' screening for the other type of disorder. In general, the presence of mental health symptoms is more likely to signal a substance use disorder than substance use symptoms to signal a mental health disorder.

Depending on the criminal justice setting, screening may include a brief interview, use of self-report instruments, and review of archival records. Drake et al. (1993) recommend using a short self-report instrument to document the frequency of use of drugs and alcohol over the past 30 days and over a longer interval. A mental status examination is also provided during many mental health and substance abuse screenings (Kosten & Kleber, 1988).

The following section describes several types of information examined during screening of mental health and substance use disorders in criminal justice settings. Most screenings do not include all of the items listed in this section, and many of these items are examined in more detail during a more comprehensive assessment. Screening for co-occurring disorders in the justice system includes the following types of information:

### **Criminal Justice**

- History of aggressive or violent behavior.
- Criminal history.
- Most recent offense of record.

### **Mental Health**

- Acute mental health symptoms (e.g. depression, hallucinations, delusions).
- Suicidal thoughts and behavior.
- Other observable mental health symptoms (e.g. major depression, thought disorder).
- Age at which mental health symptoms began.
- Prior involvement in mental health treatment, and use of psychotropic medication.
- Cognitive impairment.
- Recent trauma such as sexual/physical abuse.
- Family history of mental illness.

### **Substance Use**

- Signs of acute drug or alcohol intoxication.
- Acute signs of withdrawal from drugs or alcohol.
- Drug tolerance effects.
- Negative consequences associated with substance use.



- Self-reported substance abuse.
  - Age and pattern of first substance use.
  - History of use.
  - Current patterns of use.
  - 'Drug of choice'.
  - Motivation for using.
- Prior involvement in treatment.
- Family history of substance abuse.
- Other observable signs and symptoms of substance abuse

### **Interaction Effects of Co-Occurring Disorders**

- Effects of one disorder on the other (e.g. effects of substance abuse on mental health symptoms, or vice versa).
- Pattern of symptom expression.
- Chronology of the two disorders.
- Motivation for treatment of each of the two disorders.

### **Other Indicators**

- Infectious disease.
- Perceived level of mental health and substance abuse problems.
- Motivation and readiness for treatment.

## **Screening for Suicide**

Examining the risk of suicide should be a priority in all criminal justice settings.<sup>2</sup> Suicide screening is particularly important for individuals with mental health or substance use disorders, who have higher rates of suicidal behavior.

### **Key Points**

- Ongoing suicide screening should be provided for all individuals with co-occurring disorders in the justice system. Screening should be conducted at the time of transfer to new institutions, or to different stages in the justice system (e.g. arrest, pre-trial diversion, probation). While suicide screening is important for all individuals in the criminal justice system, it is particularly important for those with mental health disorders and co-occurring disorders.

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<sup>2</sup> More information regarding suicide screening and prevention in criminal justice settings can be found in the Jail Suicide/Mental Health Update, a quarterly publication of the National Center on Institutions and Alternatives (NCIA; Mansfield, Massachusetts), which is supported by the National Institute of Corrections.

- All suicidal behavior (including threats and attempts) should be taken seriously, and assessed promptly to determine the type of immediate intervention needed.
- Screening for suicide risk is particularly important for individuals who have severe depression, schizophrenia, or individuals who are suffering from stimulant withdrawal.
- Screening should address the following areas:
  - Current mental health symptoms.
  - Current suicidal thoughts.
  - Previous suicide attempts and their seriousness.
  - Whether suicide attempts were intended or accidental.
  - Relation between suicidal behavior and mental health symptoms.

### **Useful Questions to Ask in Suicide Screening<sup>3</sup>**

- How specific is the plan?
- What method will be used?
- When will it happen?
- How available are potential instruments (drugs, weapons)?

### **Screening for Motivation and Readiness for Treatment**

Screening for co-occurring disorders in the justice system should address an individual's motivation and readiness for treatment. In the justice system, motivation to participate in treatment is affected by perceived sanctions and incentives (e.g. court orders to complete treatment, probation revocation, 'good time' for involvement in correctional treatment), and increases when continued substance abuse threatens current housing, involvement in mental health treatment, vocational rehabilitation, family, marriage, or may lead to incarceration in jail (Ziedones & Fisher, 1994). Therefore, motivation for treatment can be increased or decreased by altering any of a variety of criminal justice system incentives and sanctions.

### **Stages of Change**

Motivation for treatment is expected to change over time, and individuals often cycle through several predictable 'stages of change' during the treatment and recovery process. The stages of change model has been developed to describe recovery from various types of addictive disorders. An early form of this model (Prochaska, DiClemente, and Norcross, 1992) included the following stages:

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<sup>3</sup> Adapted from Griffin, P.A., Hills, H.A., & Peters, R.H., (1996). Criminal justice-substance abuse cross-training: Working together for change. Rockville, MD: Center for Substance Abuse Treatment.

- Precontemplation (unawareness).
- Contemplation (awareness).
- Preparation (decision point).
- Action (active change behaviors).
- Maintenance (ongoing preventive behaviors).

A similar 'stages of change' model has been developed for individuals with co-occurring disorders (Osher & Kofoed, 1989), and has been used to structure the sequence of treatment approaches in some settings:

- Engagement (identifying potential sources of motivation).
- Persuasion (developing commitment to treatment and recovery).
- Active treatment (significant changes in behavior and lifestyle).
- Relapse prevention (focus on maintaining prolonged abstinence).

### **Key Principles in Screening for Motivation and Readiness for Treatment**

- Individuals in the earliest stages of change have little awareness of substance abuse (or other) problems, and no intentions of changing their behavior.
- Awareness of problems increases in later stages, as the individual begins to consider the goal of abstinence.
- Due to the chronic relapsing nature of substance abuse problems, movement through stages of change is not a linear process. Individuals frequently return to previous stages of change before achieving sustained abstinence.
- Motivation level has been found to be an important predictor of treatment compliance, dropout, and outcome, and is useful in making referrals to treatment services and in determining prognosis (Lehman, 1996; Ries & Ellingson, 1990).
- Treatment is likely to be ineffective until individuals accept the need for treatment of mental health and substance abuse problems (Kofoed, 1991).
- Matching individuals to treatment appropriate to the current 'stage of change' is likely to enhance treatment compliance and outcomes.
  - Assessment of stages of change is useful in treatment planning, and matching the individual to different types of treatment.
  - For individuals in early stages of change, placement in treatment that is too advanced, and that does not address ambivalence regarding behavior change may lead to drop out from treatment.

- For individuals in later stages of change, placement in services that focus primarily on early recovery issues may also lead to drop out from treatment.
- Several instruments have been developed to screen for motivation and readiness for treatment, and are reviewed later in this monograph.

### **Useful Questions to Ask in Screening for Motivation and Readiness for Treatment**

- Are you experiencing problems related to depression, unusual thoughts, or other mental health symptoms?
- How serious do you think that your mental health problems are?
- How important is it for you to get treatment for your mental health problems?
- Do you have problems related to your alcohol or drug use? How serious do you think your alcohol or drug problems are?
- Do you want to make changes in your alcohol or drug use?
- Have you taken any steps to reduce your alcohol or drug use?
- How important is it for you to get treatment for your alcohol or drug problems?

### **Use of Self-Report and Collateral Information**

Most screening and assessment for mental health and substance use disorders in the justice system is based on self-reported information. Self-reported information has been found to have good reliability and specificity, but does not always detect the full range of symptoms of co-occurring disorders (Drake, Rosenberg, & Mueser). In general, self-report information is more accurate in detecting alcohol use rather than drug use (Stone, Greenstein, Gamble, & McClellan, 1993). Individuals in the criminal justice system (particularly those with mental health problems) are often more willing to acknowledge alcohol than illicit drug use, and are generally better able to report frequency of use rather than consequences of use. However, given negative consequences associated with detection of either alcohol or drug use, it is widely accepted that self-report information should be supplemented by collateral information and chemical testing (e.g. urinalysis).

Whenever possible, interview and test results should be supplemented by collateral information obtained from family members, friends, housemates, and other informants (Drake, Alterman, & Rosenberg, 1993). Observations by arresting officers, booking officers, correctional officers, probation officers, treatment staff, case managers, and other staff of symptoms and behaviors of individuals with co-occurring disorders can provide important collateral information

for screening and assessment. Non-clinical staff working with the individual may be particularly helpful in describing withdrawal symptoms or significant psychosocial problems, such as self-destructive behaviors or difficulties in interacting with others.

Observation by family members, friends, or direct care staff may also provide important collateral information that is as accurate as that obtained from interviews or standardized instruments (Comtois, Ries, & Armstrong, 1994). For example, in community settings, the combination of ongoing observation, collateral reports, and interviews has produced the most accurate information regarding current alcohol use among individuals with schizophrenia (Drake et al., 1990). Other substance abusing associates have been found to provide more accurate information than non-using family members regarding drug and alcohol use (Kosten & Kleber, 1988). Unfortunately, individuals with co-occurring disorders often have constricted social networks and live in isolated settings, thus limiting the use of collateral informants (Drake, Alterman, & Rosenberg, 1993).

#### **Limitations of Self-Report Information<sup>4</sup>**

- Individuals in the criminal justice system may underreport the mental health or substance abuse problems if they believe that accurate reporting may lead to involvement in highly structured, lengthy, or otherwise difficult treatment programs.
- Inmates may falsely report mental health symptoms in order to receive medication, housing in medical units, or contact with medical staff.
- The transparent nature of many items contained in screening and assessment instruments lend themselves to dissimulation.
- Individuals with co-occurring disorders often contribute to misdiagnosis by denial, minimization, and failure to perceive that their substance use is related to problems of adjustment.
- Chronic mental health disorders such as psychoses and paranoia may interfere with the validity of responses (Carey, 1991). For example, individuals with schizophrenia tend to deny frequent drinking or alcohol-related problems, frequently do not understand the relationship between drinking and adjustment difficulties, and often mistakenly attribute psychosocial problems to alcohol use rather than to schizophrenia (Drake et al., 1990; Test, Wallisch, Allness, & Ripp, 1989).

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<sup>4</sup> See Griffin, P.A., Hills, H.A., & Peters, R.H. (1996). Criminal justice-substance abuse cross-training: Working together for change. Rockville, MD: Center for Substance Abuse Treatment.

- Cognitive impairments may impede screening and diagnosis of co-occurring disorders (Drake, Alterman, & Rosenberg, 1993).
- Effects of acute intoxication, withdrawal from substances, or chronic substance abuse may limit the ability to provide accurate self-report information.
- The chronic history of substance abuse often makes it difficult to date the onset of the disorders, or to find periods of abstinence.

### **Strategies to Enhance the Accuracy of Self-Report Information**

Slightly different strategies are needed to corroborate self-report information, according to the degree to which an individual acknowledges either substance abuse or mental health symptoms. Strategies should also reflect the consequences provided for accurate reporting of symptoms within the particular criminal justice context in which the screening or assessment is conducted. As described in the following diagram<sup>5</sup>, denial of substance abuse should trigger use of drug testing as an adjunctive screening procedure, particularly for individuals with mental health symptoms, while mental health symptoms reported among individuals with co-occurring substance abuse symptoms should be examined carefully to determine if these are substance-induced.

#### **Self-Reported or Observed Symptoms**

#### **Issues and Strategies**

##### **Mental Health**

##### **Substance Abuse**

|   |   |   |
|---|---|---|
| + | - | Frequent underreporting of substance abuse. Provide drug testing, specific inquiry regarding history of substance abuse, and examination of collateral information.   |
| - | - | Routine and random drug testing may help to identify unreported substance abuse.  |
| + | + | Mental health symptoms are frequently substance-induced. Evaluate the history and causes of mental health symptoms to identify the contribution of substance abuse to these symptoms.   |
| - | + | Least likely condition to produce results from additional mental health assessment. However, mental health symptoms (e.g. depression, anxiety) may not be detected during initial screening and should be reexamined over time. |

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<sup>5</sup> Adapted from material presented by Dr. Roger Weiss, at the National GAINS Center cross-training curriculum workshop, 1997.

General strategies for enhancing the accuracy of self-report information include the following:

- Supplement interview and test results with information from collaterals (e.g. family members, friends), and clinical observation.
- Examine archival records to examine the onset, course, diagnoses, and response to treatment of mental health and substance use disorders, and other relevant history (e.g. to identify alcohol or drug-related offenses in the criminal history).
- Provide regular drug testing. Drug testing has been found to enhance the accuracy of the self-reported substance abuse history in the justice system.
- Wait to use self-report instruments until after mental health symptoms have stabilized (Drake, Alterman & Rosenberg 1993), and until it is determined that an individual is not in withdrawal or intoxicated.
- Provide repeated screening and assessment on a regular basis (Babor, Stephen, & Marlatt, 1987).
- Provide a supportive interview setting. In general, sensitive clinical information is more likely to be disclosed to an individual who is well-known and trusted. Drake, Alterman, and Rosenberg (1993) describe several related strategies:
  - Self-report information should be compiled in a nonjudgmental manner, and in a relaxing setting.
  - The interview should be prefaced with an assurance of confidentiality, or discussion of the limits of confidentiality (e.g. conditions under which confidentiality may be breached).
- Use of motivational interviewing techniques (Miller & Rollnick, 1991). These include several promising strategies for increasing compliance and accurate self-reporting during screening and assessment:
  - **Express empathy.**
  - **Develop discrepancy** between stated goals and current behaviors (e.g. desire to keep a steady job and 'binge' drug use).
  - **Avoid arguing.**
  - **Roll with resistance**, by offering new ideas and finding new ways to encourage behavior change.
  - **Support self-efficacy**, or self-confidence.

- Use of a structured interview approach. Drake, Rosenberg, and Mueser (1996) recommend the following sequence of steps in conducting a structured interview:
  1. Screen for lifetime history of co-occurring disorders using the screening portion of the Structured Clinical Interview for DSM-IV (SCID-IV).
  2. Use a calendar method (e.g. 'timeline followback') to document use patterns in recent months.
  3. If there is evidence of alcohol or drug use, administer a brief substance abuse screen (e.g. Michigan Alcoholism Screening Test, MAST; Drug Abuse Screening Test, DAST) to assess consequences of use.
  4. Assess current and past history of substance abuse (including moderate and regular alcohol use).



## IV. Key Clinical Issues

### Understanding the Complicated Symptom Presentation

Individuals with co-occurring disorders in the justice system are characterized by diverse and changing symptoms. Several different combinations of co-occurring mental health disorders and symptom interactions are reviewed in Appendix A. Staff working with individuals who have co-occurring disorders should develop an understanding of how individual differences in the history of mental health disorders, patterns of substance abuse, consequences of substance abuse, and symptom interactions influence the current symptom presentation. Information should be examined regarding the history of onset, symptom presentation, and the symptom interaction of co-occurring disorders, recognizing that the symptoms and functional consequences of the disorders may have changed substantially over time.

Screening, diagnosis, and assessment of co-occurring mental health and substance use disorders are often rendered more difficult by symptom interactions between these disorders, including symptom ‘mimicking’, ‘masking’, ‘precipitation’, and ‘exacerbation’. Understanding symptom interactions is important in order to provide an accurate description of current disorders, and to identify symptoms that may contribute to substance abuse relapse or recurrence of mental health problems. Ongoing observation of symptom interaction is often needed to provide diagnostic discrimination between various different mental health and substance use disorders.

#### **Types of Symptom Interaction**

- Use of alcohol and drugs can **create** mental health symptoms.
- Alcohol and drug use may **precipitate** or bring about the emergence of some mental health disorders. Mental health disorders can also precipitate substance use disorders.
  - Substance abuse can elicit mental health symptoms among individuals who are predisposed through either environmental or genetic risk factors.
  - Most individuals with co-occurring disorders report that mental health symptoms preceded substance abuse (Regier et al., 1990).
- Mental health symptoms may be **exacerbated**, or worsened, by alcohol or drug use.
- Mental health symptoms or disorders are sometimes **mimicked** by alcohol and drug use.
- Alcohol and drug use may **mask** or hide mental health symptoms or disorders that are actually present. Mental health symptoms are often not identified until after a long period of abstinence.

## Examples of Symptom Interaction

### Precipitation of Symptoms or Disorders

- Of the 48% of opiate addicts who are diagnosed with depression, most report that the depression followed the onset of opiate use (Rounsaville et al., 1982).
- Hallucinogen use can precipitate various mental health disorders (Pierce, 1991).
  - Specific effects of hallucinogens include depersonalization, delusional thinking, flashbacks, and paranoid ideation (Kosten & Kleber, 1988; RachBeisel & McDuff, 1995).
  - Ecstasy or MDMA use can result in paranoid psychosis that is clinically identical to schizophrenia (RachBeisel & McDuff, 1995).
- Alcohol use may aggravate schizophrenia; and schizophrenia may, in turn, lower alcohol tolerance (Ban, 1977).
- Alcohol use may lead to biologically-induced depression (Schuckit and Monteiro, 1988). Depression may also result from problems caused by alcohol, such as divorce or loss of a job.
- In a substance-induced mood disorder, depression may be associated with drug or alcohol abuse and related to the physiological changes associated with withdrawal or the stress of going through the withdrawal process (Schuckit, 1986).

### Exacerbation of Symptoms

- Individuals with mental health disorders may experience symptom augmentation with even small amounts of substance use.
- Alcohol and drug use often lead to exacerbation of the bipolar disorder (Goodwin & Jamison, 1992).
- Alcohol and drug use often augment threatening and hostile behavior, and disorganized and incoherent speech (Drake, Osher, & Wallach, 1989).
- Heavy cocaine use can lead to intense anxiety (Post, Kotin, & Goodwin, 1974).

## Mimicking

- Psychotic symptoms (e.g. paranoid delusions, auditory hallucinations) can be caused by chronic alcohol or amphetamine abuse and withdrawal, or by use of hallucinogens and cannabis (Schuckit & Monteiro, 1988; Ungerleider & DeAngelis, 1981). However, staff should exercise caution before dismissing psychotic symptoms as secondary to acute alcohol intoxication or withdrawal.
- Acute effects of chronic substance abuse and withdrawal can produce agitation, anxiety, depression that are similar to symptoms exhibited by individuals with major mental disorders. However, staff should exercise caution before dismissing severe depressive symptoms as secondary to alcohol withdrawal.
  - Pronounced withdrawal symptoms are not seen among some illicit substances (e.g. cocaine).
  - Withdrawal symptoms may be misdiagnosed as flu symptoms, effects of a hangover, or mental health symptoms.
- Withdrawal from opiates can lead to symptoms of depression such as disturbed sexual functioning, appetite, and sleep. Opiate addicts maintained on methadone may also present these same symptoms (Weissman et al., 1977).
- Anxiety may result from withdrawal from depressants, opioids, and stimulants (Ries, 1994; Schuckit and Monteiro, 1988).
- Anxiety and hyperactivity may result from steroid use (Ries, 1994).
- Panic is sometimes associated with caffeine use and nicotine withdrawal (Ries, 1994).
- Acute manic symptoms may be induced or mimicked by use of stimulants, steroids, hallucinogens, or polydrug combinations (Ries, 1994).
- Manic symptoms are occasionally caused by withdrawal from depressants (Ries, 1994).
- Symptoms of bipolar disorder may be mimicked by symptoms of cocaine intoxication and withdrawal, as well as the symptoms of opioid intoxication (Saxon et al., 1994).

### **Masking**

- Alcohol and cannabis sometimes mask the presence of psychosis, or bipolar disorder (DeVito et al., 1970).

### **Drug Testing**

Drug testing (also referred to as chemical testing, laboratory testing, or toxicology screening) is an objective and cost-effective adjunct to screening and assessment for co-occurring disorders in the justice system, and is an integral component of most treatment programs. Drug testing should not replace other types of screening and assessment, but serves to corroborate self-reported information and to enhance accuracy in detecting substance abuse (Galletly, Field, & Prior, 1993). In addition to its use in screening, regular drug testing can help to detect relapse during treatment, augments motivation to remain abstinent, and reduces substance abuse in institutional settings.

The most common type of drug testing in the justice system is urinalysis. Breath analysis is often used to detect alcohol use, and several other techniques have recently been developed (e.g. hair analysis, sweat patches) to examine an extended substance abuse history. Most drug testing is limited by the short period of time that drugs and alcohol remain in the body. For example, alcohol is eliminated from the body within several hours of ingestion, and cocaine is eliminated within 72 hours. As a result, frequent and ongoing drug testing is needed during treatment. Although positive results do not necessarily indicate drug dependence, there is a high correlation between positive results and regular use. Negative drug test results obtained at the start of treatment should not be interpreted to reflect the absence of substance abuse problems.

### **Who Should Receive Drug Testing?**

- All individuals with co-occurring disorders in the justice system should receive regular drug testing.
- More frequent drug testing should be provided for individuals who are at high risk for relapse (Drake & Mercer-McFadden, 1995), as reflected by the following characteristics:
  - History of frequent relapse.
  - History of frequent hospitalization, including acute care.
  - Sudden, unexpected changes in clinical symptoms.
  - History of violent behavior.
  - Individuals with unstable housing arrangements.
  - Individuals returning from community furloughs/visits.

### **When Should Drug Testing be Provided?**

- Drug testing should begin immediately after an arrest or other triggering event that brings the individual into contact with the justice system.
- Drug testing should be administered at random intervals during the course of treatment and supervision.
- During the first few months of community treatment and supervision, drug testing should be conducted at least weekly, and optimally twice weekly.
- As an individual demonstrates an ability to remain abstinent, the frequency of drug testing may be reduced.

### **What Drug Testing Procedures Should be Followed?**

- Drug testing procedures should reflect established guidelines such as those established by the American Probation and Parole Association (APPA).
- The scope of testing should be sufficiently broad to detect the major drug of choice as well as other potential drugs of abuse, including alcohol.
  - The most common substances used by individuals with involvement in the justice system are cocaine, marijuana, and alcohol. Optimally, drug tests should also examine opiates (e.g., heroin), amphetamines and PCP.
  - Testing should examine the drugs most commonly used in the geographic area.
- Drug testing procedures should be designed to promote reliability and validity, according to the following guidelines:
  - Direct visual observation of urine sample collection.
  - Verification of temperature and measure creatinine levels to determine the extent of water loading.
  - Documented chain-of-custody for each sample collected. This involves careful procedures to track the supervision and movement of drug testing specimens.
  - Verification of drug test results when they are contested (e.g. via another method of testing).
- Criminal justice staff should be immediately notified when an individual has tested positive, has failed to submit to drug testing, or has submitted an adulterated sample. Refusals to submit to testing, and submission of tainted samples should be treated as positive test results.

## **Providing an Extended Baseline for Screening, Diagnosis, and Assessment**

Screening, diagnosis and assessment of co-occurring disorders are optimally provided soon after involvement in the justice system. Screening is routinely conducted as individuals enter different stages of the justice system in order to flag immediate health care needs, to review eligibility for jail diversion, to determine institutional housing assignments, and to identify supervision and service needs. However, many individuals who are screened or assessed in court, community corrections, or jail settings may be under the influence of alcohol or drugs, and may need to be detoxified prior to more accurate determination of mental health or substance use disorders. Most prison inmates screening for co-occurring disorders will have been detoxified at the time of admission, although chronic residual side effects of drug use may initially cloud the symptom picture.

### **Why Should an Extended Baseline be Provided?**

To obtain the most accurate results, screening, diagnosis, and assessment should be delayed for as long as possible after an individual has attained sobriety, in order to determine whether symptoms of co-occurring disorders will remit, persist, or worsen (Weiss & Mirin, 1989).

- The length of the extended baseline for screening, diagnosis, and assessment should be determined by the severity of the symptoms and the general health status (Weiss & Mirin, 1989).
- Examination of co-occurring disorders should be delayed until the individual is psychologically and physically stable (Weiss, Mirin & Griffin, 1992). This may require waiting up to 4 weeks (RachBeisel & McDuff, 1995; Zimberg (1993). Guidelines reviewed during development of the DSM-IV manual indicate that individuals should be abstinent for 4-6 weeks before an accurate mental health diagnosis can be provided, depending on the drug(s) used and the mental health disorder in question.

### **What Steps Should be Taken to Provide an Extended Baseline?<sup>6</sup>**

1. Assess the significance of the substance use disorder
  - Obtain a longitudinal history of mental health and substance abuse symptom onset.

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<sup>6</sup> Adapted from Kofoed (1991); Peters & Hills (1993); RachBeisel & McDuff (1995), and Schuckit (1989). See also Griffin, P.A., Hills, H.A., & Peters, (1996), Criminal justice-substance abuse cross-training: Working together for change. Rockville, MD: Center for Substance Abuse Treatment.

- Analyze whether mental health symptoms occur only in the context of substance abuse.
  - Determine whether sustained abstinence leads to rapid and full remission of mental health symptoms.
2. Determine the length of the current abstinence
    - If 4-6 weeks of abstinence has not been achieved, delay diagnosis until this has been achieved, depending on the drug(s) used and the mental health disorder in question.
  3. Reassess mental health symptoms at the end of 4-6 weeks of abstinence.
  4. If mental health symptoms remit fully, potential referral for substance abuse or specialized 'dual diagnosis' services; if not, potential referral for mental health or 'dual diagnosis' services.
  5. Provide ongoing reevaluation of mental health symptoms and appropriateness of treatment placement.

### **Strategies to Consider During the Extended Baseline**

- Given the likelihood of symptomatic change among those with co-occurring disorders over an extended period of time, early diagnostic indicators should be continually readdressed (Kofoed, 1991).
- Screening, diagnosis, and assessment conducted during the extended baseline period should be conducted by staff who understand patterns of symptom interaction, including acute and chronic effects of various drugs of abuse (Weiss, Mirin, & Griffin, 1992).
- Use of psychotropic medication is generally thought to be inappropriate for individuals whose affective or cognitive symptoms will attenuate with abstinence, although the risks of not treating active mental health symptoms should be considered.
- Consideration of current symptoms should often take precedence over developing a diagnosis. For example, suicidal behavior should be addressed and monitored as a primary concern, regardless of the competing diagnoses that may be under consideration. This is of particular concern among individuals with co-occurring disorders, who have higher rates of suicide in comparison to other mental health populations.

- The utility of current mental health diagnoses during screening for co-occurring will be limited among those individuals whose symptoms are in temporary remission. Rather than focusing on diagnoses, it may be more relevant to evaluate the past history of mental health and substance abuse problems, and the level of psychosocial functioning in the past year.

### **How Long Does it Take for Symptoms to Clarify?<sup>7</sup>**

- **Psychotic symptoms** (e.g. hallucinations, paranoia) caused by substance abuse usually clear within days to a week of abstinence (Bukstein, Brent & Kaminer, 1989; Schuckit, 1989).
- **Affective symptoms** (e.g. depression, mania) related to substance usually clear within two weeks of abstinence (Bukstein, Brent & Kaminer, 1989; Saxon, Calsyn, Stanton & Hawker, 1994; Schuckit, 1989).
- **Symptoms of anxiety** may take up to six months to clear, since this is one of the major symptoms of alcohol and drug withdrawal (DeSoto et al, 1985). Lingered anxiety has been referred to as protracted abstinence syndrome (PAS; DeSoto et al., 1985).

### **Should a Distinction be Made Between 'Primary' and 'Secondary' Disorders?**

In the past, individuals with co-occurring disorders have been provided diagnoses according to which set of symptoms appeared first.

- A **'primary' disorder** indicated that symptoms predated the other co-occurring disorder.
- A **'secondary' disorder** indicated that symptoms followed those of the other co-occurring disorder.
- **'Independent' disorders** meant that the disorders waxed and waned autonomously and had different risk factors and prognoses (Boyd et al., 1984).

One outgrowth of this approach was the belief that treating the 'primary' disorder would be enough to resolve the 'secondary' co-occurring disorder. This simplistic strategy has led to exclusion of individuals from mental health or substance abuse services, shifting individuals with co-occurring disorders to the other system, and poor treatment outcomes due to inattention to the co-occurring disorder.

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<sup>7</sup> Although the following general guidelines are provided, the period required for symptom clarification depends on the interaction of the drug(s) and specific symptoms presented.



The current consensus is that distinctions between 'primary' and 'secondary' disorders based on time of symptom onset are not useful, and should be avoided (Drake & Mercer-McFadden, 1995). These distinctions are particularly problematic for individuals with co-occurring disorders who are 'dependent' on drugs or alcohol, for whom separate diagnoses should be provided that reflect the importance of both disorders (Lehman & Dixon, 1995).

## **Staff Training**

Staff in criminal justice settings are often untrained in detection, diagnosis, and assessment of co-occurring disorders. Ongoing training should be provided in each of these areas for staff working with individuals who have co-occurring disorders.

- Mental health and substance abuse staff in the criminal justice system are often unaware of the high rates of co-occurring disorders, which can lead to misdiagnosis (Drake, Alterman, & Rosenberg, 1993). Mental health staff also frequently underestimate the effects of substance abuse on other areas of psychosocial functioning (Drake, Alterman & Rosenberg, 1993).
- Staff who do not have experience, education, or training in mental health or substance use disorders may be reluctant to inquire about symptoms of these disorders.
  - For example, substance abuse staff are often uncomfortable with people who show psychotic symptoms.
  - Close working relationships with mental health staff, cross-training related to co-occurring disorders, and experience with individuals with mental health and substance abuse symptoms increase the likelihood of gathering information regarding these symptoms.
- Other staff training that is likely to enhance the accuracy of screening and assessment information include:
  - Detecting signs and symptoms of co-occurring disorders.
  - Understanding mental health and substance abuse symptom interactions.
  - Understanding aspects of co-occurring disorders that reduce accuracy of self-report information.
  - Use of integrated screening instruments.
  - Initiating referrals for assessment and treatment.
  - Use of collateral sources of information.
  - Enhancing compliance and accuracy during interviews.

## V. Selecting Screening Instruments for Co-Occurring Disorders

Standardized screening instruments should be used to identify co-occurring disorders in the justice system. Use of similar instruments across different justice settings (e.g. pre-trial screening, community supervision) will promote a shared understanding of co-occurring problems and treatment interventions that are needed. As described previously, screening instruments used in the justice system to detect co-occurring disorders should address the following key components: (1) Criminal justice history and status, (2) identification of signs and symptoms of major mental health disorders (e.g. depression, bipolar disorder, schizophrenia), (3) identification of symptoms of alcohol and drug dependence, (4) patterns of recent and current substance abuse, and (5) other motivational and health factors that may affect involvement in treatment.

Given the absence of current instruments that address each of these five components, several independent mental health and substance abuse instruments are often combined to screen for co-occurring disorders. Screening instruments are sometimes included in a larger assessment battery to provide focused information regarding acute mental health symptoms, substance dependence symptoms. Screening instruments for co-occurring disorders should be administered concurrently with drug testing and examination of collateral information.

Several key issues in selecting screening instruments include the following:

- **Reliability.** Reliability of screening instruments can be difficult to achieve because individuals with co-occurring disorders often present a changing diagnostic picture due to the influence of intoxication and withdrawal (Carey, 1991).
- **Validity.** Many standardized substance abuse measures are not sensitive or specific (Drake et al., 1990). Sensitivity refers to an ability to identify individuals with either mental health and/or substance abuse problems, while specificity refers to an ability to identify individuals without such problems.
- **Use in Criminal Justice Settings.** Few mental health or substance abuse instruments have been validated within criminal justice settings (Peters, 1992; Peters & Greenbaum, 1996).

### What Combination of Instruments Should be Used to Screen for Co-Occurring Disorders?

The following section provides a critical evaluation of mental health and substance abuse screening instruments. Instruments differ significantly in their coverage of mental health and substance abuse symptoms, validation for use in community and criminal justice settings, cost, scoring procedures, and training required for administration. Based on considerations discussed in the following section, the following combinations of instruments may be useful to screening for co-occurring disorders in justice settings:

1. Either the Brief Symptom Inventory (BSI) or the Referral Decision Scale (RDS) to address mental health symptoms.

(and)

2. Either the TCU Drug Dependence Screen (DDS), Simple Screening Instrument (SSI), or the combination of the Alcohol Dependence Scale (ADS) and the Addiction Severity Index (ASI) - Drug Use section to address substance abuse symptoms.

This combined screening would require approximately 10-15 minutes to administer and score. The Beck Depression Inventory (BDI) may provide a more detailed screening for depression, as needed, and if additional time is available. Screening for motivation and readiness for treatment may also be provided if time is available, although currently there is little evidence regarding the use and application of instruments for this purpose in criminal justice settings.

### **Mental Health Screening Instruments**

Several mental health screening instruments are reviewed in the following section. Without use of these instruments, mental health disorders are often undetected. As a result, staff are less likely to anticipate suicidal behavior and other mental health problems, and the effectiveness of treatment is reduced.

#### **Beck Depression Inventory (BDI)**

The BDI (Beck & Beamesderfer, 1974) is a 21-item self-report of symptoms that screens for symptoms of depression and suicidality.

##### **Positive Features**

- The instrument requires no significant training to administer.
- The BDI has higher sensitivity (94%) and specificity (59%) than the Raskin Depression Scale, the HAM-D, and the SCL-90-R (Rounsaville et al., 1979).
- The BDI has moderately good sensitivity (67%) and moderately good specificity (69%) in diagnosing depression among individuals with alcohol problems (Willenbring, 1986).
- The BDI was found to be the most effective instrument in detecting depression among alcohol abusers (Weiss, 1989).

### **Concerns**

- Based on Weiss's (1989) and Willenbring's (1986) findings, the BDI should not be used as a sole indicator of depression, but rather in conjunction with other instruments.
- Because it is a measure of subjective feelings of depression, it is difficult for the BDI to discriminate between normal individuals who are experiencing sadness from clinically depressed individuals (Hesselbrock et al., 1983).

### **Brief Symptom Inventory (BSI)**

The BSI is a short form of the Symptom Checklist 90 - Revised (SCL-90-R), comprised of 53 items. The instrument provides three global indices of psychopathology (General Severity Index, Positive Symptom Total, Positive Symptom Distress Index) and 9 primary psychiatric symptom dimensions.

### **Positive Features**

- The BSI is quite brief to administer, and requires no significant training.
- Only a 6th grade reading level is required.
- The BSI has adequate internal consistency and test-retest reliability.
- The instrument is highly correlated with symptom dimensions from the SCL-90-R (Derogatis & Melisaratos, 1983).
- The BSI has adequate convergent validity with MMPI, though not as good as the SCL-90-R for some dimensions (Derogatis & Melisaratos, 1983).

### **Concerns**

- The BSI has poor discriminant validity, and has high correlations with several unrelated MMPI scales (Boulet & Boss, 1991).
- The instrument has low construct validity for symptom dimensions, and may be most useful as a general indicator of psychopathology (Boulet & Boss, 1991).
- The BSI may be reactive to defensive or "help seeking" response sets (Boulet & Boss, 1991).

### **General Behavior Inventory (GBI)**

The GBI (Depue & Klein, 1988) is a 73-item self-report instrument that examines mood disorders.

#### **Positive Features**

- It requires no significant training to administer, nor expertise for scoring and interpretation.
- The GBI differentiates between unipolar and bipolar depression.
- The GBI has performed more effectively than clinical evaluation in detecting bipolar disorder (Saxon et al., 1994).

#### **Concerns**

- The GBI displayed less than optimal concordance rates with clinical diagnoses. However, Saxon et al. (1994) concluded that it is an effective instrument for screening for severe cases of mood disorders in drug-dependent individuals.

### **Hamilton Depression Scale (HAM-D)**

The Ham-D (Hamilton, 1960) is a 17-item scale that is completed by an interviewer, based on self-report information.

#### **Positive Features**

- Several key elements of depression are examined: Sleep disturbance, somatization, anxiety-depression, and apathy.
- The Ham-D has moderately good sensitivity (78-100%) in diagnosing depression in alcoholics (Rounsaville et al., 1979; Willenbring, 1986).

#### **Concerns**

- This instrument requires training to administer.
- Findings are inconsistent regarding the specificity of the Ham-D for use among alcoholics. Rounsaville et al. (1979) found the instrument to have moderately poor specificity (57%) in diagnosing depression among alcoholics. However, Willenbring (1986), found very good specificity (96%) in this same population.

### **Referral Decision Scale (RDS)**

The RDS (Teplin & Schwartz, 1989) is a 14-item measure of mental health symptoms that was developed to identify individuals entering jails who experience mental health problems that require subsequent in-jail treatment.

#### **Positive Features**

- The instrument was developed and validated in a criminal justice setting, and has been found to be quite useful in detecting the presence of major mental illness among jail inmates.
- The instrument requires no training to administer.
- The instrument is self-administered.

#### **Concerns**

- The validity of the RDS has not been examined among individuals with co-occurring disorders.
- The RDS examines only a few mental health disorders (depression, bipolar disorder, schizophrenia), although these tend to be the most problematic in criminal justice settings.

### **Symptom Checklist 90 - Revised (SCL-90-R)**

The SCL-90-R (Derogatis, Lipman, & Rickels, 1974) is a 90-item, multidimensional self-report inventory designed to assess recently experienced physical and psychological distress. The BSI is an abbreviated version of the SCL-90-R, and is somewhat easier to score.

#### **Positive Features**

- The instrument requires no training to administer.
- The SCL-90-R requires a short amount of time to administer.
- The instrument has been frequently used in criminal justice settings.
- The instrument is self-administered.

- The SCL-90-R covers a wide range of symptom dimensions that include somatization, obsessive-compulsive, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation, and psychoticism.
- The SCL-90-R has very good sensitivity (94%; Rounsaville et al. 1979).

### Concerns

- The SCL-90-R has poor specificity (39%) in diagnosing depression among alcoholics (94%; Rounsaville et al. 1979).
- The BSI is an abbreviated and somewhat easier to administer version of the SCL-90-R.

### Substance Abuse Screening Instruments

Few studies have examined the validity of substance abuse screening instruments in criminal justice settings. However, findings from a recent study (described below) identify several screening instruments that hold considerable promise for use with individuals in the criminal justice system.

- In the most comprehensive study examining the validity of substance abuse screening instruments in criminal justice settings, three instruments were found to be the most effective in identifying prison inmates with substance dependence problems (Peters & Greenbaum, 1996):
  1. TCU Drug Dependence Screen (DDS).
  2. Simple Screening Instrument (SSI).
  3. ADS/ASI-Drug (a combined instrument, consisting of the Alcohol Dependence Scale and the Addiction Severity Index - Drug Use section).

These instruments outperformed several other screens, including the Michigan Alcoholism Screening Test (MAST) - Short version, the ASI - Alcohol Use section, the Drug Abuse Screening Test (DAST-20), and the Substance Abuse Subtle Screening Inventory (SASSI-2) on key measures of positive predictive value, sensitivity, and overall accuracy.

- In another study examining the validity of the Alcohol Dependence Scale (ADS) with male federal prisoners (Hodgins & Lightfoot, 1989), ADS scores were found to be significantly correlated with objective measures of alcohol use severity.

- In community settings, several substance abuse screening instruments have been found to have adequate validity (McHugo, Paskus, & Drake, 1993; Peters & Greenbaum, 1996; Ross, Gavin, & Skinner, 1990; Staley & El Guebaly, 1990). These include the following instruments:
  - Alcohol Dependence Scale (ADS).
  - Drug Abuse Screening Test (DAST; and DAST-20, a short version of the DAST).
  - Michigan Alcoholism Screening Test (MAST; and SMAST - a short version of the MAST).
  - CAGE.
- Each of these substance abuse screening measures are somewhat vulnerable to manipulation by those seeking to conceal substance abuse problems (Kivlahan, Sher, & Donovan, 1989; Staley & El Guebaly, 1990).

### **Alcohol Dependence Scale (ADS)**

The ADS (Skinner & Horn, 1984) is a widely used 25-item instrument developed to screen for alcohol dependence symptoms. The instrument was developed through factor analysis of the original 147-item Alcohol Use Inventory (AUI), and is published by the Addiction Research Foundation in Toronto, Canada.

#### **Positive Features**

- The ADS, in combination with the ASI - Drug Use section was one of three screening instruments found to be the most effective in identifying substance 'dependent' inmates in a recent study (Peters & Greenbaum, 1996).
- The ADS, in combination with the ASI - Drug Use section was one of the two most effective substance abuse screening instruments in identifying 'non-dependent' inmates (Peters & Greenbaum, 1996).
- ADS scores have been found to be significantly correlated with objective measures of alcohol use severity among incarcerated male inmates (Hodgins & Lightfoot, 1989).
- The ADS has been found to perform adequately in community settings (Ross, Gavin, & Skinner, 1990).
- The ADS is brief to administer, and is easily scored.



### **Concerns**

- The ADS does not examine patterns (e.g. quantity, frequency) of recent or past alcohol use.
- The ADS is limited to screening for alcohol abuse problems.
- The ADS is a commercial product, although the cost is quite modest.

### **Addiction Severity Index (ASI)**

The ASI (McLellan, Luborsky, O'Brien, & Woody, 1980; McLellan et al., 1992) is currently the most widely used substance abuse instrument, and is used for screening, assessment, and treatment planning. The ASI is a 'public domain' instrument developed through the National Institute on Drug Abuse (NIDA). The instrument provides a structured interview format to examine seven areas of functioning that are commonly affected by substance abuse, including drug/alcohol use, family/social relationships, employment/support status, and mental health status. Many agencies, including those in criminal justice settings, have adapted modified versions of the ASI for use as a substance abuse screening instrument. Two independent sections of the ASI examining drug and alcohol use are frequently used as screening instruments.

### **Positive Features**

- The ASI - Drug Use section, in combination with the ADS was one of three screening instruments found to be the most effective in identifying substance 'dependent' inmates in a recent study (Peters & Greenbaum, 1996).
- The ASI - Drug Use section, in combination with the ADS was one of the two most effective substance abuse screening instruments in identifying 'non-dependent' inmates (Peters & Greenbaum, 1996).
- The ASI is highly correlated with objective indicators of addiction severity (McLellan et al., 1985; McLellan, Luborsky, Woody, & O'Brien, 1980; Searles, Alterman, & Purtill, 1990).
- The ASI is one of the few instruments that measures several different functional aspects of psychosocial functioning related to substance abuse.
- The ASI provides a concise estimate of the history of substance abuse as well as recent use.

- Normative data are available for criminal justice populations (McLellan, et al., 1992).
- Severity ratings are provided in each functional area assessed, reflecting the level of individual dysfunction. These continuous scores are useful for research purposes.
- The ASI was found to have good interrater reliability and good test-retest reliability with drug dependent individuals (McLellan et al., 1985).
- The ASI is available at no cost.

### **Concerns**

- Significant training is needed to administer and score the ASI.
- The sensitivity and specificity of the ASI with comorbid populations is not yet known (Kofoed, 1991).
- The ASI was developed for use as an interview. A self-report version of the ASI (SA-ASI) has recently been developed, although the psychometric properties of this instrument have not been examined.
- Administration of the entire ASI would require from 45-75 minutes. However, the alcohol and drug use sections could be completed in significantly less time.

### **Alcohol Use Disorders Identification Test (AUDIT)**

The AUDIT is a two-part alcoholism screening method developed by the World Health Organization. The first part (AUDIT Core) is a 10-item questionnaire measuring alcohol consumption, dependence symptoms, and problems caused by drinking. The second part (AUDIT Clinical) is a physical examination instrument assessing trauma history, abnormal physical exam findings, and serum GGT level reflective of alcohol related effects. The AUDIT Clinical does not specifically refer to alcohol consumption.

### **Positive Features**

- The AUDIT is quite brief to administer.
- The instrument focuses on current substance abuse problems.

- A decision process has been developed to link results from the AUDIT with brief interventions or referral to more intensive treatment (Allen & Columbus, 1995).
- Items were carefully selected based on factor analytic procedures (Bohn, Babor, & Kramzler, 1995).
- The AUDIT has high sensitivity in detecting substance abuse problems (99% for the 'Core' and 82% for the 'Clinical' component (Bohn, et al., 1995).
- The instrument has been used extensively in research projects and epidemiological studies (Allen & Columbus, 1995).

### **Concerns**

- The AUDIT does not examine substance abuse problems occurring prior to the last year.
- The instrument has only moderate specificity (74% for the 'Core', and 40% for the 'Clinical' component (Bohn, et al., 1995).

### **CAGE**

The CAGE is a brief 4-item screen for alcohol use (Mayfield, McCleod, & Hall, 1974). The four questions make up the acronym CAGE and consist of the following: 1) Have you felt you ought to Cut down on your drinking?; 2) Have people Annoyed you by criticizing your drinking?; 3) Have you ever felt bad or Guilty about your drinking?; 4) Have you had a drink first thing in the morning to steady your nerves or to get rid of a hangover (Eye-opener)?. The CAGEAID has been developed for screening drug use disorders.

### **Positive Features**

- The CAGE has moderately good sensitivity (74%) and very good specificity (97%) in diagnosing substance use disorders among individuals with schizophrenia (McHugo, Paskus, & Drake, 1993).
- The CAGE does not require specific training to administer.
- The CAGE is quite brief to administer.

### **Concerns**

- The CAGE does not examine patterns (e.g. quantity, frequency) of recent or past substance use.
- The CAGE examines a narrow range of diagnostic symptoms related to alcohol abuse and dependence.
- The CAGE has not been validated for use in criminal justice settings.
- The CAGE is more accurate in classifying males than females (McHugo, Paskus, & Drake, 1974).

### **Drug Abuse Screening Test (DAST-20)**

The DAST (Skinner, 1982) is a 20-item screening instrument that examines symptoms of drug dependence. Items from the DAST-20 parallel items developed for the Michigan Alcoholism Screening Test (MAST), which focus on alcohol dependence. The DAST-20 is published by the Addiction Research Foundation in Toronto, Canada.

### **Positive Features**

- The DAST has been found to perform adequately in community settings (Staley & El Guebaly, 1990).
- The instrument is brief to administer, and is easily scored.
- The DAST is widely used in clinical settings.

### **Concerns**

- The DAST was not found to be one of the most effective screening instruments in identifying substance 'dependent' inmates in a recent study (Peters & Greenbaum, 1996).
- The validity of the DAST has not been examined among individuals with co-occurring disorders.
- The DAST does not examine patterns (e.g. quantity, frequency) of recent or past substance use.
- The DAST is limited to screening for drug problems.
- The DAST is a commercial product, although the cost is quite modest.

### **Michigan Alcoholism Screening Test (MAST)**

The MAST (Selzer, 1971) is a self-administered screening instrument, consisting of 25 items related to symptoms and consequences of alcohol use. The screen uses a yes/no format and inquires about alcohol problems occurring throughout the lifetime (Toland & Moss, 1988). The MAST-short version (SMAST) is a widely used 13-item screening instrument that examines symptoms of alcohol dependence. This version includes items from the original MAST that were highly discriminating for alcoholism. The MAST is a 'public domain' instrument, and was developed through the National Institute on Alcohol Abuse and Alcoholism (NIAAA).

#### **Positive Features**

- The MAST has good sensitivity in criminal justice settings, and effectively identified most inmates with alcohol dependence (Peters & Greenbaum, 1996).
- The MAST has good sensitivity (88%) and moderately good specificity (69%) in identifying alcoholism among individuals with schizophrenia (Searles, Alterman and Purtill, 1990; Toland and Moss, 1989).
- The MAST has been found to be reliable, to effectively discriminate between problem and non-problem drinkers (Mischke & Venneri, 1987) and to identify alcoholism and excessive drinking problems (Bernadt, Mumford, & Murray, (1984).
- The MAST requires no training to administer.
- The MAST is more accurate in identifying alcohol problems among males with schizophrenia rather than for females (McHugo, Paskus and Drake, 1993).
- Accuracy for the SMAST tends to improve when individuals are queried about alcohol use problems within the past year, rather than over the lifetime (Zung, 1984).

#### **Concerns**

- The MAST was not found to be one of the most effective screening instruments in identifying substance 'dependent' inmates in a recent study (Peters & Greenbaum, 1996).
- Both the MAST and SMAST tend to have greater 'sensitivity' than 'specificity', and thus misidentify individuals as substance abusers who do not have substance abuse problems.

- The MAST may be problematic for individuals with schizophrenia, who have a tendency to answer positively when asked about hallucinations associated with heavy drinking, even when such phenomena are unrelated to alcohol consumption (Toland & Moss, 1988).
- The MAST does not examine patterns (e.g. quantity, frequency) of recent alcohol use.
- The instrument is limited to screening for alcohol problems.
- The MAST has relatively low 'specificity' in criminal justice settings, and thus is not as effective in identifying inmates who do not have alcohol dependence problems (Peters & Greenbaum, 1996).
- The MAST lacks a time frame for responses. As a result, positive scores do not necessarily indicate a current alcohol problem.
- The instrument does not consider the possibility of symptom remission (Zung, 1982).

### **Substance Abuse Subtle Screening Inventory (SASSI-2)**

The SASSI-2 (Miller, 1985) is a widely used 88-item screening instrument that examines symptoms and other indicators of alcohol and drug dependence. The instrument includes a section to detect 'subtle' indicators of substance abuse, and two additional sections to detect more obvious symptoms of alcohol and drug dependence. The SASSI-2 is published by the SASSI Institute, in Bloomington, Indiana.

#### **Positive Features**

- The SASSI does not require specific training to administer.
- The instrument is quite brief to administer.

#### **Concerns**

- The SASSI was not found to be one of the most effective screening instruments in identifying substance 'dependent' inmates in a recent study (Peters & Greenbaum, 1996). The SASSI had among the lowest sensitivity and specificity of all the substance abuse screening instruments examined in this study.
- Unlike many other substance abuse screening instruments, the validity of the SASSI has not been demonstrated in peer reviewed studies.

- The few published studies examining the SASSI's validity (Cooper & Robinson, 1987; Fuller, Fishman, Taylor, & Wood, 1994; Svanum & McGrew, 1995; Yeh & Hedgespeth, 1995) are flawed by use of inadequate criterion measures and poorly constructed control groups.
- Results of the few studies examining the SASSI's validity are not favorable. In the largest sample (Svanum et al., 1995), the SASSI was found to have a sensitivity rate of only 33%.
- The validity of the SASSI has not been examined among individuals with co-occurring disorders.
- The SASSI does not examine patterns (e.g. quantity, frequency) of recent or past substance use.
- The scoring procedures are somewhat difficult.
- The SASSI administration manual is not well organized and does not provide easily accessible interpretative information.
- The SASSI is a commercial product.

### **Simple Screening Instrument (SSI)**

The SSI (Center for Substance Abuse Treatment, 1994) is a recently developed 16-item screening instrument that examines symptoms of alcohol and drug dependence. The instrument was developed by the Center for Substance Abuse Treatment (CSAT) through selection of screening items from 13 existing screening instruments. The SSI examines five different 'domains' related to substance dependence, including: (1) Alcohol and/or drug consumption, (2) preoccupation and loss of control, (3) adverse consequences, (4) problem recognition, and (5) tolerance and withdrawal.

#### **Positive Features**

- The SSI was one of three screening instruments found to be the most effective in identifying substance 'dependent' inmates in a recent study (Peters & Greenbaum, 1996).
- The SSI had the highest sensitivity of all screening instruments examined in a recent study (Peters & Greenbaum, 1996), and thus identified the highest proportion of 'dependent' inmates.
- The SSI is brief to administer, and is easily scored.
- The SSI is available at no cost.

### **Concerns**

- The validity of the SSI has not been examined among individuals with co-occurring disorders.
- The SSI does not examine patterns (e.g. quantity, frequency) of recent or past substance use.
- The SSI was just recently developed, and is not yet widely used.
- There has not been extensive research examining the psychometric properties of the SSI.

### **TCU Drug Dependence Screen (DDS)**

The Drug Dependence Screen (DDS) was derived from a substance abuse diagnostic instrument (Brief Background Assessment - Drug-Related Problems section) developed by the Texas Christian University (TCU), Institute of Behavioral Research as part of an intake assessment for the DATAR project, a NIDA-funded initiative evaluating the effectiveness of new treatment intervention strategies (Simpson, 1993; Broome, Knight, Joe, & Simpson, in press). The DDS includes 19 items that examine diagnostic symptoms of drug use, and is a 'public domain' instrument.

### **Positive Features**

- The DDS was one of three screening instruments found to be the most effective in identifying substance 'dependent' inmates in a recent study (Peters & Greenbaum, 1996).
- The DDS was one of the two most effective substance abuse screening instruments in identifying 'non-dependent' inmates in a recent study (Peters & Greenbaum, 1996).
- The DDS examines key DSM diagnostic symptoms related to substance dependence.
- The DDS is brief to administer, and is easily scored.
- The DDS is available at no cost.



### **Concerns**

- The validity of the DDS has not been examined among individuals with co-occurring disorders.
- The DDS does not examine patterns (e.g. quantity, frequency) of recent or past substance use.

### **Motivational Screening Instruments**

Three new instruments have been developed to examine motivation and readiness for treatment. These are designed primarily to identify individuals who are inappropriate for admission to substance abuse treatment. Two of these instruments (SOCRATES, URICA) are based on the 'stage of change' model. As described previously, information regarding motivation and readiness for treatment have been found to predict drop out from treatment and treatment outcome, and may be particularly useful in matching individuals to different types of treatment.

#### **Circumstances, Motivation, Readiness, and Suitability Scale (CMRS)**

The CMRS (DeLeon & Jainchill, 1986) was developed to assess risk for dropout from a therapeutic community program and to identify participants who are most likely to remain in substance abuse treatment. The CMRS is a 42-item that takes approximately 30 minutes to complete. The instrument has four subscales (Circumstances, Motivation, Readiness, and Suitability) that measure: (1) external pressures to seek treatment, (2) internal reasons to seek change, (3) perceived need for treatment to achieve change, and (4) acceptance of the therapeutic community approach, reflected by the willingness to make major lifestyle changes, long-term commitment to an intensive treatment program, and rejection/exhaustion of other treatment modalities or options. A shortened 18-item version of the instrument (CMR) was recently developed that includes three subscales (Circumstances, Motivation, and Readiness).

### **Positive Features**

- The CMRS was found to be useful in predicting 30-day retention in long-term therapeutic community treatment. (DeLeon, Melnick, Kressel, & Jainchill, 1994)
- The CMRS has good internal consistency, with Chronbach's alpha ranging from .85-.87.
- The abbreviated CMR instrument has been found to predict involvement in substance abuse aftercare treatment following release from prison (Melnick, 1997).

### **Concerns**

- The CMRS has not been thoroughly evaluated to determine its usefulness in predicting retention to in-jail or community-based offender treatment programs. However, it appears to hold some promise in identifying individuals who require more intensive drug treatment programs.
- The instrument has low reliability for the Circumstances (C) scale.
- The validity of the CMRS has not been examined among individuals with co-occurring disorders.
- The CMRS has not been validated for use in criminal justice settings.

### **Stages of Change Readiness and Treatment Eagerness Scale (SOCRATES)**

The SOCRATES - Form 7AS (Personal Drinking Questionnaire) and Form 7DS (Personal Drug Use Questionnaire) are 19-item research instruments that were designed to screen readiness for change in alcohol and drug abusers, according to the 'stages of change' model. The 19-item forms were empirically derived from longer 40-item forms of the instrument. The SOCRATES 7AS and 7DS are 'public domain' instruments, and were developed through NIAAA. The instruments yield 5 separate scale scores that correspond with Prochaska and DiClemente's (1992) stages of change: Precontemplation (P), Determination/decision (D), Action (A), and Maintenance (M). Recent factor analysis of the SOCRATES has led to development of three scales ('Ambivalence', 'Recognition', and 'Taking Action'), each of which reflect different stages of motivation and readiness for treatment.

### **Positive Features**

- The SOCRATES was found to be highly reliable for use in correctional settings (Peters & Greenbaum, 1996).
- Chronbach's alpha internal consistency coefficients range from moderately good for the Contemplation subscale (.67) to high for the Determination subscale (.98). Test-retest reliabilities are also high, ranging from .83 to .97.
- The SOCRATES 'Recognition' Scale was found to have moderately good sensitivity and specificity in identifying substance 'dependent' inmates (Peters & Greenbaum, 1996).
- The instrument is brief to administer, and is easily scored.

### **Concerns**

- The validity of the SOCRATES has not been examined among individuals with co-occurring disorders.
- The SOCRATES has not been validated for use in treatment matching within criminal justice settings.

### **University of Rhode Island Change Assessment Scale (URICA)**

The URICA (McConaughy, Prochaska, & Velicer, 1983; DiClemente & Hughes, 1990) is a 32-item self-report questionnaire, and does not require clinical training to administer (DiClemente and Hughes, 1990; McConaughy, Prochaska, and Velicer, 1983). This instrument examines four theoretical 'stages of change' (Precontemplation, Contemplation, Action, and Maintenance) related to individual motivation for treatment (DiClemente and Prochaska 1982, 1985; Prochaska and DiClemente, 1992). Four subscales are included within the instrument, reflecting each of the levels of change. The URICA differs from the SOCRATES in that it does not directly query about motivation for alcohol or drug treatment, but instead presents questions in a more general manner.

### **Positive Features**

- Research has established the validity of the URICA for use with alcoholics.
- The URICA has been found to be reliable and to identify distinct motivational profiles (DiClemente & Hughes, 1990).
- The URICA provides a potentially useful means to detect denial of substance abuse problems, ambivalence in changing to a drug-free lifestyle, and other cognitive factors affecting participation in treatment.

### **Concerns**

- The URICA is somewhat difficult to score.
- The URICA does not specifically address alcohol or drug abuse problems, but presents questions to address the range of addictive disorders.
- The validity of the URICA has not been examined among individuals with co-occurring disorders.
- The URICA has not been validated for use in criminal justice settings.

## **Screening for Attention-Deficit/Hyperactivity Disorder (ADHD)**

### **Childhood Symptom Checklist**

The Childhood Symptom Checklist (DeObaldia & Parsons, 1984) is a behavior checklist normally filled out by parents and used to identify problem behaviors in children. As a self-report measure, it requires no training for administration. Despite its intended use for children, Horton et al. (1990) studied its use in identifying attention deficit disorder, residual type in adult alcoholics, and found a significant relationship between the checklist and DSM III-R diagnoses.

## **VI. Selecting Diagnostic Instruments for Co-Occurring Disorders**

In addition to providing descriptive and prognostic information, diagnostic (i.e. DSM-IV) classification with individuals who have co-occurring disorders assists in identifying key questions to be addressed during psychosocial assessment, and in developing individualized treatment plans (Drake and Mercer-McFadden, 1995). Diagnostic classification instruments examine presenting symptoms of mental health and substance use disorders within the framework of the DSM-IV. Instruments may be fully structured (e.g. the DIS), thereby requiring minimal training to administer; or may be semi-structured (e.g. SCID-IV, SADS-L), requiring application of clinical judgement.

The following considerations should be made in selecting diagnostic instruments:

- Structured interviews such as the SCID-IV and DIS are recommended (Drake et al., 1993).
- Diagnostic interview measures should have good reliability and validity.
- Ongoing observation of mental health and substance abuse symptoms, use of collateral sources of information, and drug testing should supplement use of structured diagnostic interviews, pursuant to diagnostic classification.
- Diagnoses of individual with co-occurring disorders should be reviewed periodically, since the psychological presentation is likely to change over time with prolonged abstinence.

### **Diagnostic Instruments**

#### **DIS (Diagnostic Interview Schedule)**

The DIS and C-DIS (Computerized Diagnostic Interview Schedule) are fully structured diagnostic interview instruments (Blouin, Perez, & Blouin, 1988; Robins et al., 1981). Administration of the DIS does not require clinical experience or judgement. The C-DIS is designed to be self-administered by computer, but requires availability of an assistant to answer respondent's questions. Modules included in the DIS include: Mood, anxiety, schizophrenia, eating, somatization, psychoactive substance abuse, and antisocial personality disorders. The DIS provides information regarding both current and lifetime diagnoses.

#### **Positive Features**

- The DIS includes an Antisocial Personality Disorder module, which is commonly associated with substance abuse.

- The DIS has good agreement with the MAST (.79) in detecting alcoholism among individuals treated for mental health disorders (Goethe & Fisher, 1995).
- The DIS has good test-retest reliability (95 % agreement for severe disorders) in diagnosing male jail inmates (Abram & Teplin, 1991).
- The DIS can be administered by non-clinicians, and requires minimal training.

### **Concerns**

- Structured instruments such as the DIS may fail to detect 25% of those abusing alcohol (Drake et al., 1990) and possibly more of those who are abusing illicit substances (Stone, Greenstein, Gamble, & McLellan, 1993).
- There is poor agreement between the DIS and the SADS-L in diagnosing depression among individuals with co-occurring alcohol and drug problems (Hasin & Grant, 1987).
- The C-DIS provides poor to moderately good (-.05 to .70) test-retest reliability in diagnosing comorbid substance use and mental disorders, depending on the type of mental disorder (Ross, Swinson, Doumani, & Larkin et al, 1995).

### **Structured Clinical Interview for DSM-IV - Patient Version (SCID - IV)**

The SCID is a structured interview designed for administration by a trained clinician (First, Spitzer, Gibbon, & Williams, 1996). The SCID was recently updated for DSM-IV, and now includes a research version (SCID-RV) and a clinical version (SCID-CV). The clinical version is a shorter protocol (30-60 minutes) that examines only disorders that are frequently seen in clinical settings (First et al., 1996). The full SCID (Research Version) requires approximately 1.5 to 2 hours to administer, and examines 32 different Axis I diagnoses, including the major mental health and substance use disorders.

### **Positive Features**

- Interrater reliability is moderately good (.64 -.72) when clinicians use the SCID to examine co-occurring disorders (Corty, Lehman and Myers; 1993).
- The SCID-IV Substance Use Disorders Module has good test-retest reliability (from 77-100% agreement across disorders) in diagnosing male prison inmates (Peters & Greenbaum, 1996).

### **Concerns**

- Structured instruments such as the SCID may fail to detect 25% of those abusing alcohol (Drake et al., 1990) and possibly more of those who are abusing illicit substances (Stone, Greenstein, Gamble, & McLellan, 1993).
- The SCID showed variable (.31 -.83) test-retest reliability in diagnosing comorbid psychoactive substance use disorders and mental disorders, depending on the type of mental disorder (Ross, Swinson, Doumani, and Larkin et al, 1995).
- The SCID requires clinical judgment to determine whether certain self-reported symptoms meet criteria for a particular disorder (Corty, Lehman, & Myers, 1993).
- Significant training is required for administration and scoring of the SCID.
- The SCID-CV excludes most of the subtypes and specifiers included in the Research Version, including the "with/without physiological dependence" and "remission" specifiers for substance dependence diagnoses (First et al., 1996).

### **Schedule for Affective Disorders and Schizophrenia - Lifetime Version (SADS-L)**

The SADS-L is a semi-structured interview designed to evaluate current and lifetime affective disorders (Endicott & Spitzer, 1978). The instrument offers specified probes for diagnostic criteria, but requires a trained clinician to administer.

### **Positive Features**

- Overall, the SADS-L was found to be more effective than the DIS in diagnosing depressive disorders (Hasin & Grant, 1987).

### **Concerns**

- The SADS-L has not yet been updated for the DSM-IV.
- In diagnosing depression among individuals with alcohol and drug problems, Hasin and Grant (1987) found that there is poor agreement between the SADS-L and the DIS (Hasin & Grant, 1987).
- The SADS-L has not been used extensively, or validated for use in criminal justice settings.
- Significant training is required for administration and scoring of the SADS-L.

## **VII. Assessment of Co-Occurring Disorders**

Clinical assessment differs significantly from 'classification' conducted in jails and prisons, which involves examination of risk and other factors relevant to inmate placement, housing, work assignment, and involvement in program services. Assessment of co-occurring disorders is usually accomplished after completion of screening and referral to treatment services. If symptoms of both mental health and substance use disorders are detected during screening, the assessment should examine potential interactive effects of these disorders.

Assessment provides the basis for development of an individualized treatment plan and reentry/follow-up plan for individuals in the justice system who have co-occurring disorders. Key elements of assessment of co-occurring disorders includes examination of skill deficits, needs for psychotropic medications, types of treatment and ancillary services that are needed. As noted previously, sufficient time should be provided prior to assessment to insure that an individual is detoxified, sober, and that mental health symptoms exhibited are unrelated to withdrawal from substance use (Weiss & Mirin, 1989). Standardized assessment methods should be implemented at an early stage and throughout involvement in the criminal justice system (National Institute of Corrections, 1991, Peters, 1992).

### **What Information Should be Included in an Assessment of Co-Occurring Disorders?**

The following types of information should be examined in assessment of co-occurring disorders in the criminal justice system:

- Criminal justice history and status.
- Mental health history, current symptoms, and level of functioning.
- Substance abuse history, current symptoms, and level of functioning.
- History of interaction between mental health and substance use disorders.
- Family history of mental health and substance use disorders (including birth complications and in utero substance exposure).
- Medical and health status.
- Social/family relationships.
- Interpersonal coping strategies, problem solving abilities, and communication skills.
- Employment/vocational status.
- Educational history and status.
- Literacy, IQ, and developmental disabilities.
- Treatment history and response to/compliance with treatment (including psychopharmacological interventions).
- Prior experience with peer support groups.



- Cognitive appraisal of treatment and recovery.
  - Motivation and readiness for treatment.
  - Self-efficacy in adopting lifestyle changes (e.g. maintaining abstinence, complying with medication),
  - Expectancies related to substance use (both positive and negative), and use of medication.
- Participant conceptualization of treatment needs.
- Resources and limitations affecting the ability to participate in treatment (e.g. transportation problems, homelessness, child care needs).

### **What Areas Should be Assessed in More Detail?**

#### **Symptoms of Co-Occurring Disorders**

- Specific mental health and substance abuse symptoms should be described as well as their severity (i.e. intensity of behavioral, cognitive and physiological conditions associated with a particular disorder (Donovan, 1988).
- It should be determined whether symptoms are acute or chronic, and how long the individual has had the symptoms and disorders.

#### **Substance Abuse History and Status**

- Substance abuse information should include drug of choice, other secondary drugs, misuse of prescription drugs, reasons for substance abuse, context of substance abuse, periods of abstinence and how they were attained, treatment history, age of onset, frequency, amount, and duration of use, and patterns of high and low use.

#### **Mental Health History and Status**

- Mental health information should include current and past symptoms (e.g. suicidality, depression, anxiety, psychosis, paranoia, stress, self-image, inattentiveness, impulsivity, hyperactivity), treatment history, and patterns of denial and manipulation.

#### **History of Interaction Between Co-Occurring Disorders**

- Patterns of mental health symptoms and substance abuse.
- Effects of mental health symptoms on substance abuse, and vice versa.
- Chronology of mental health and substance use disorders.

### **Social Relationships**

- Assessment should examine social interactions and lifestyle, effects of peer pressure to use drugs and alcohol, family history, and evidence of current support systems.
- The stability of the home and social environment should be assessed, including violence in the home and effects of the home/other relevant social environments (e.g. work, school) on abstinence from substance use (Ries, 1994).

### **Medical/Health Care History and Status**

- Key areas to examine include history of injury and trauma, chronic disease, physical disabilities, substance toxicity and withdrawal, impaired cognition, neurological symptoms, and prior use of psychiatric medication.
- If a history of AD/HD is suspected, assessment should examine attention and concentration difficulties, hyperactivity and impulsivity, and the developmental history of childhood AD/HD symptoms.

### **Criminal Justice History and Status**

- The complete criminal history should be reviewed.
- Current criminal justice status should be examined.

## **What Instruments are Available for Assessment of Co-Occurring Disorders?**

Few instruments have been validated for use in assessing individuals with co-occurring disorders. Moreover, few studies have attempted to validate assessment instruments in criminal justice settings. Given the heterogeneity of symptoms presented by individuals with co-occurring disorders, it is unlikely that a single instrument will be developed to assess the full range of co-occurring problems, or to distinguish between individuals who have mental health or substance use disorders (Osher & Kofoed, 1989).

An integrated approach should be developed for assessment of co-occurring disorders in the justice system. This integrated approach should include comprehensive review of mental health and substance use disorders, and examination of criminal justice history and status. An independent assessment should be conducted of each disorder, in addition to an assessment of interactive effects of the disorders. Several previously described screening instruments are often used as part of the assessment battery to examine specialized areas (e.g. diagnostic symptoms of alcohol and/or drug abuse) related to co-occurring disorders. More comprehensive instruments for assessing co-occurring disorders are described in the following section, including the MMPI-2, MCMI-III, and PAI. Case manager ratings, information from collateral informants (e.g. family members), and archival (e.g. criminal history) should also be considered during assessment.

## **What Combination of Instruments Should be Used to Assess for Co-Occurring Disorders?**

The following section provides a critical evaluation of mental health and substance abuse assessment instruments. Instruments differ significantly in their coverage of areas related to mental health and substance use disorders, validation for use in community and criminal justice settings, cost, scoring procedures, and training required for administration. Based on considerations discussed in the following section, the following combination of instruments may be useful to assess for co-occurring disorders in justice settings:

1. Either the Minnesota Multiphasic Personality Inventory-2 (MMPI-2), the Millon Clinical Multiaxial Inventory-III (MCMI-III), or the Personality Assessment Inventory (PAI) to examine mental health disorders.

**(and)**

2. The Addiction Severity Index (ASI) to examine areas related to substance abuse.

This combined assessment would require approximately 3 hours to administer and score. Either the DIS or SCID may also be used to provide more precise diagnostic information, as needed, and if additional time is available.

### **Mental Health Assessment Instruments**

#### **Minnesota Multiphasic Personality Inventory (MMPI-2)**

The MMPI (Hathaway & McKinley, 1951; Hathaway & McKinley, 1967) is a self-report measure with 567 items, 10 main clinical scales, and 10 supplementary scales. The MMPI-2 (Hathaway and McKinley, 1989) is a restandardized version of the MMPI. The MacAndrew Alcoholism (MAC) scale is a 49-item supplementary scale on the MMPI-2, that provides a subtle screening measure to differentiate alcoholics from nonalcoholics. None of the items relate directly to alcohol use or abuse (Searles, Alterman, & Purtill, 1990).

#### **Positive Features**

- Hills (1994) used the MMPI-2 to define three different profiles of individuals with co-occurring disorders.
  - Cluster one included a group of individuals that had clinically significant mean score elevations on eight of the 10 clinical scales.
  - Cluster two included those with the highest scale elevation occurring on the psychopathic deviant scale.
  - Cluster three included those individuals without elevations on any of the clinical scales.

- The MMPI has been frequently used in correctional settings for classification and assignment to housing or inmate programs, and to predict an inmate's response to placement in a correctional setting. MMPI subtypes described by Megargee and Bohn (1979) are often used to identify inmates who require more intensive supervision and structured program activities.
- The MMPI is useful in identifying characteristics of antisocial personality disorder.
- The MMPI is included in the Wisconsin Department of Corrections, Wisconsin Uniform Substance Abuse Screening Battery, used to assign inmates to various levels of substance abuse treatment.
- The MMPI depression scale is more effective than the BDI in identifying depression in alcoholics (Hesselbrock et al., 1983), and has good sensitivity (83-88%) and moderately good specificity (57-60%) for this purpose (Willenbring, 1986).
- The MAC scale has moderately good sensitivity (68%) and specificity (64%) in identifying alcohol problems among individuals with schizophrenia (Searles, Alterman and Purtill, 1990).

### **Concerns**

- The MMPI was designed to identify psychopathology, and not to identify substance use disorders.
- There are conflicting results from studies examining whether the MMPI - MAC scale differentiates between substance abusers with co-occurring Axis I disorders and substance abusers without these disorders (Preng and Clopton, 1986; Rozensky, Neireck, Slotnick and Morse, 1988).
- Although the MMPI - MAC scale differentiates between individuals with co-occurring Axis I and Axis II disorders, the scale does not effectively distinguish between substance abusers and individuals with co-occurring Axis II disorders.

### **Millon Clinical Multiaxial Inventory (MCMI-III)**

The MCMI is a self-report measure with several subscales (Millon, 1983; Millon, 1992).

- The MCMI is useful in assessing Axis II (personality) disorders that may affect involvement in treatment.

- The Drug Abuse Scale (DAS) of this instrument was designed to measure personality characteristics often associated with drug abuse (Calsyn & Saxon, 1989). In a mental health sample, the DAS had poor sensitivity (.39) but high specificity (.88) in identifying drug users (Calsyn and Saxon, 1989).

### **Personality Assessment Inventory (PAI)**

The PAI is a self-report measure with 344 items and 22 scales (Morey, 1991). The 11 clinical scales of the PAI include separate measures of alcohol problems and drug problems. Five treatment scales are also provided in the PAI.

- The PAI has good accuracy (90%) in classifying alcohol problems (Boyle and Lennon, 1994), although specificity is only 25%.
- Test-retest reliabilities of scales range from .62 (Anxiety) to .86 (Suicidal Ideation).

## **Substance Abuse Assessment Instruments**

### **Addiction Severity Index (ASI)**

(Previously described in screening section).

### **Individual Assessment Profile (IAP)**

The IAP is a structured interview assessment designed by the National Institute on Drug Abuse for use in drug abuse treatment programs (Flynn et al., 1995). It requires approximately 50 minutes to administer, and can be administered by staff of varying levels of training and experience. Eight major domains include: Background and demographics; drug, alcohol, and tobacco use; illegal activities; sources of support, such as employment history and current status; sources of income and amounts; health; and treatment history/mental health.

- High concordance between the IAP and urinalyses (88% - 99%) for drugs other than cocaine (Flynn et al., 1995).
- Agreement between self-reported cocaine use on the IAP and urinalysis for cocaine was 62%.
- Test-retest reliability of the IAP is moderately high, with correlations of more than .60 achieved for 80% of the items.

## **VIII. Assessment of Criminal Justice Information**

Assessment of co-occurring disorders in the justice system should include careful examination of the criminal history and current criminal justice status. The pattern of prior criminal offenses may reveal important information regarding how mental health and substance abuse problems have affected criminal behavior. The criminal justice history may also help to identify the need for supervised reentry, case management services, placement in structured residential programs following release from custody, and relapse prevention strategies to avoid high risk situations that may elicit a return to criminal behavior, substance abuse, and recurrence of mental health symptoms. Information regarding the current criminal justice status will assist in coordinating treatment and management issues with courts and community supervision staff.

### **What Types of Criminal Justice Information Should be Assessed?<sup>8</sup>**

#### **Criminal History**

- Prior arrests (including age at first arrest, type of arrest).
- Juvenile justice history.
- Alcohol and drug-related offenses (e.g. DUI/DWI, drug possession or sales, reckless driving).
- Level of intoxication at time of previous offenses (either reported or unreported offenses).
- Felony convictions.
- Number of prior jail and prison admissions, duration of incarceration.
- Disciplinary incidents in jail and prison.
- Use of isolation management in jail and prison.
- Probation or parole violations.

#### **Current Criminal Justice Status**

- Court orders requiring assessment and involvement in treatment, including the length of involvement in treatment (if specified).
- Duration of criminal justice supervision (e.g. pretrial release, probation, parole).
- Supervision arrangements (e.g. supervising probation/parole officer, frequency of court or supervision appointments, reporting requirements).
- Consequences for non-compliance with treatment guidelines.

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<sup>8</sup> See Griffin, P.A., Hills, H.A., & Peters, R.H. (1996). Criminal justice-substance abuse cross-training: Working together for change. Rockville, MD: Center for Substance Abuse Treatment.

## **Key Considerations in Assessing Criminal Justice Information**

- The self-reported felony history provided during assessment should be corroborated through inspection of official criminal justice history records (e.g. 'rap sheets', arrest reports, probation records/reports).
- Sentencing orders should be reviewed by treatment staff during assessment, and prior to development of the treatment/services plan. Staff should obtain a copy of relevant court orders and other documentation that describe sentencing and supervision arrangements.
- Reporting requirements to the court, pre-trial services, probation, or parole, or other criminal justice staff should be clarified during the assessment regarding the following:
  - Frequency of reports required by the courts, or community supervision agencies.
  - Type of treatment information (e.g. attendance, positive drug tests, other evidence of relapse or recurrence of symptoms) required by the courts, or community supervision agencies.
  - Names and addresses of individuals who should receive reports.

## IX. Summary

A significant number of individuals with co-occurring mental health and substance use disorders are involved in the justice system. These individuals are characterized by tremendous diversity in symptoms, functioning level, behaviors exhibited before and after involvement in the justice system, and in their response to treatment services. Co-occurring disorders are often undetected in the justice system due to the absence of effective screening and assessment, and to the difficulty in identifying the often complicated symptom picture presented by this population. Non-detection of co-occurring disorders in the justice system can lead to augmented behavior problems, elevated risk for suicide, poor outcomes in treatment, rearrest, and reincarceration.

A coordinated system of screening, diagnosis, and assessment for mental health and substance use disorders should be established in all justice settings (including pre-trial, community corrections, jail, and prisons). This approach should include active collaboration between criminal justice and treatment staff to share information regarding signs and symptoms of co-occurring disorders, involvement in treatment, and management of this population. Integrated screening and assessment approaches should be used, involving examination of both mental health and substance use disorders. Screening should be provided to all individuals entering the justice system, on an ongoing basis within a single justice setting, and at different transition points (e.g. arrest, jail booking, prison reception) throughout the system. Detection of a single disorder (i.e. either mental health or substance abuse) during screening or assessment should immediately 'trigger' investigation of the other type of disorder. One should also be aware of the impact that the first disorder may have on this diagnostic process.

Screening, diagnosis, and assessment should optimally be delayed for 4-6 weeks for individuals who may not have attained sobriety, in order to clarify symptoms of co-occurring disorders.<sup>9</sup> Mental health symptoms should be reviewed at the end of this period, at which time recommendations can be made with more confidence regarding the need for mental health, substance abuse, or specialized 'dual diagnosis' treatment.

Standardized screening and assessment protocols for co-occurring disorders should be implemented in justice settings. Use of formal instruments should be supplemented whenever possible by an individual interview, drug testing, review of archival records, and information from collateral informants. Key elements of screening should include: (1) Criminal justice history and status, (2) identification of signs and symptoms of major mental health disorders (e.g. depression, bipolar disorder, schizophrenia), (3) identification of symptoms of alcohol and drug dependence, (4) patterns of recent and current substance abuse, and (5) other motivational and health factors that may affect involvement in treatment. Examination of suicide risk should be included in all mental health and substance abuse screenings.

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<sup>9</sup> An exception to this rule would be if the mental health symptoms were not consistent with any substance-related syndrome.



In addition to addressing each of the major screening elements (see above), assessments should also examine: (1) Patterns of mental health and substance abuse symptom interaction, (2) detailed history and current status of co-occurring disorders, and (3) other psychosocial areas that are affected by co-occurring disorders, or that may influence treatment or management of these disorders (e.g. medical and health care history and status, social/family relationships, and vocational and educational history and status), and (4) detailed information regarding criminal history and current criminal justice status. Sentencing orders and criminal justice reporting requirements should be reviewed by treatment staff prior to completion of a treatment/services plan.

In the absence of current instruments developed to screen or assess co-occurring disorders, several independent mental health and substance abuse instruments should be combined for this purpose. Instruments should be reliable, valid in detecting mental health, substance abuse, and other related problems, and optimally should have a proven record of use in criminal justice settings. Mental health instruments that have been validated for use in criminal justice settings include the Referral Decision Scale (RDS) and the Minnesota Multiphasic Personality Inventory-2 (MMPI-2). Substance abuse instruments that have been validated for use in criminal justice settings include the Addiction Severity Index (ASI), the Alcohol Dependence Scale (ADS), the TCU Drug Dependence Screen (DDS), and the Simple Screening Instrument (SSI). Several motivational screening instruments (CMRS, SOCRATES) have also been used in criminal justice settings.

Ongoing training should be provided for staff involved in screening and assessment of co-occurring disorders in the justice system. Training should be provided in detecting signs and symptoms of co-occurring disorders, understanding the complicated symptom presentation (e.g. mimicking, masking), use of integrated screening and assessment instruments, strategies to enhance accuracy during interviews, drug testing, differential diagnosis, and initiating referral for assessment and treatment.

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## **Appendix A**

### **Co-Occurrence of Specific Mental Disorders with Substance Abuse**

Variation in symptoms, presenting problems, and history of mental health and substance use disorders among offenders presents many challenges for those attempting to provide screening, assessment, and triage in criminal justice settings. Although there tend to be common patterns among specific mental health and substance use disorders, there is little evidence for preferential drug selection among individuals with co-occurring disorders (Mueser, Bennett, & Kushner, 1995). In this regard, demographic variables are more important determinants of drug preference than clinical features. Alcohol is the most commonly abused substance by the mentally ill, although individuals with mental health disorders are more likely than the general population to be polydrug users (Mueser, Bennett, and Kushner, 1995). Affective disorders are more common than other mental health problems among individuals with co-occurring disorders. Information regarding the interaction of specific mental health and substance use disorders is presented in the following section.

#### **Co-Occurring Affective Disorders**

##### **Prevalence**

- Depression is the most common co-occurring disorder among substance abusers (Kosten & Kleber, 1988).

##### **Drugs of Choice**

- The most common drugs used by individuals with unipolar depression are opiates, alcohol, and cocaine (RachBeisel & McDuff, 1995). Flynn et al. (1995) also found barbiturates to be common among this group.
- Individuals with euphoric mania tend to prefer stimulant drugs while manic individuals with dysphoric symptoms tend to prefer alcohol, sedative-hypnotic drugs, marijuana, and opioids (Weiss & Wong, 1995).

##### **Etiology**

- Despite the eventual worsening of depression from alcohol and other drugs, when asked to give reasons for drug use most depressed individuals report that it improves their mood (Weiss, Griffin, & Mirin, 1992). A brief period of elevation may be a sufficient reason for a depressed individual to use drugs (Weiss & Wong, 1995).
- Individuals with bipolar disorders abuse substances to relieve symptoms of agitation, irritability, and insomnia. Drug use also tends to enhance their symptoms of euphoria, grandiosity, and hypersexuality (Gawin & Kleber, 1986).

### **Symptom Presentation**

- Compared to their nondepressed counterparts, depressed alcoholics have a detached interpersonal style, distracted cognition, alienated self-image, and mixed depressed-anxious emotionality as measured by the MCMI and POMS (McMahon & Davidson, 1986).

### **Assessment Issues**

- Assessment of depression in individuals with alcohol use disorders can be difficult because the physical effects of ethanol can mimic depressive symptoms (Hesselbrock et al., 1983).
- Hopelessness may lead a depressed individual to respond apathetically to their substance abuse problem (Weiss & Wong, 1995).

### **Course of Treatment**

- Depressed individuals with alcoholism have longer histories of problem drinking, more previous treatments for alcohol misuse, more difficulty controlling alcohol consumption, more marital problems, and more physical symptoms related to alcohol abuse, as compared with nondepressed alcoholics (McMahon & Davidson, 1986).
- Despite their lack of motivation, substance abusing individuals with co-occurring depression are more likely to be abstinent at a one month follow-up after inpatient treatment than individuals with co-occurring bipolar disorder, schizophrenia, panic disorder or organic disorders (Ries & Ellingson, 1990).
- Depression predicts poorer outcome for alcoholic and opiate addicted males than their nondepressed counterparts. In alcoholic and opiate addicted females, however, depression predicts better outcome than non-depression (Rounsaville, Dolinsky, Babor, & Meyer, 1987).

## **Co-Occurring Psychotic Disorders**

### **Prevalence**

- Family studies indicate that individuals with schizophrenia with a history of substance abuse or dependence do not differ from non-abusing individuals in the number of relatives with schizophrenia, but that the abusing individuals have more relatives with a history of substance abuse and affective disorders. (Dixon et al., 1991).
- Among alcoholic individuals with schizophrenia, those with a family history of alcoholism have a more severe course of the alcoholism than those without a family history of alcoholism.

### **Assessment Issues**

- These individuals usually do not feel comfortable with the intensive confrontations typical of inpatient and outpatient alcohol or substance abuse treatment programs (Schuckit, 1989a).

### **Course of Treatment**

- These individuals can often be disruptive in a group setting (Schuckit, 1989a).
- Individuals with schizophrenia also respond less well to alcoholism treatment than other individuals with mental disorders (Noordsy, Drake, Biesanz, & McHugo, 1994).

## **Co-Occurring Attention Deficit/Hyperactivity Disorder (AD/HD)**

### **Prevalence**

- AD/HD and substance abuse share several characteristics. Both disorders are found more often in men than women, have a high prevalence rate in families, and appear to have genetic influences (Wilens, Biderman, Spencer, & Frances, 1994).
- Both disorders have high rates of co-occurring antisocial, conduct, anxiety and mood disorders (Ross, Glaser, & Germanson, 1988).
- Family studies have found high rates of alcoholism and antisocial personality disorder in the parents of hyperactive children (Cantwell, 1972).

### **Drugs of Choice**

- Individuals with AD/HD disorder are more likely to abuse opiates than cocaine (Rounsaville et al., 1991).

### **Etiology**

- Individuals with AD/HD disorder tend to use alcohol to change mood.

### **Symptom Presentation**

- "Hyperactive" alcoholics have more interpersonal difficulties, report greater use of other drugs, and experience reduced impulse control in comparison to "non-hyperactive" alcoholics (Alterman et al., 1985).

### **Drugs of Choice**

- The substances most commonly abused by individuals with schizophrenia include nicotine, alcohol, cocaine, caffeine, marijuana, and the hallucinogens.
- Many individuals with schizophrenia are polydrug users (Ziedones & Fisher, 1994).
- The drug of choice for individuals with schizophrenia is determined by availability (Mueser, Bellack & Blanchard, 1992).

### **Etiology**

- Substance use in schizophrenia has been associated with a more severe course of the disorder and earlier age of onset (Mueser, Bellack, & Blanchard, 1992).
- Alcohol and substance use disorders in schizophrenia is associated with several aspects of poor adjustment and poor outcome (Drake et al., 1990).
- Individuals with schizophrenia report that alcohol temporarily relieves symptoms such as delusions of reference and hallucinations (Freed, 1975). However, there is little evidence supporting self-medication as an explanation for why individuals with schizophrenia are more vulnerable to substance abuse (Mueser et al., 1992). Individuals with schizophrenia are likely to deny substance abuse, yet even small amounts of a substance can have a large clinical impact on their level of functioning (Ziedones & Fisher, 1994).

### **Symptom Presentation**

- Individuals with schizophrenia who have co-occurring substance abuse problems often present with the following symptoms: Delusions and hallucinations (Barbee et al., 1989), depressive symptoms (Drake et al. 1989), disruptive behaviors, poor self-care, treatment noncompliance (Altermann et al., 1980), assaultive behavior (Yesavage & Zarcone, 1983), housing instability and homelessness, increased rates of rehospitalization (Drake et al., 1989), and increased rates of drug abuse (Barbee et al., 1989). These individuals also present with legal problems, violent acting out behavior, suicidal ideation and attempts, malnourishment, recent traumas and crisis prone-lives (Ziedones & Fisher, 1994).
- Mental health symptoms often fluctuate rapidly.
- Individuals with schizophrenia and alcohol problems were more likely than non-alcoholics to feel that alcohol worsens their positive and negative symptoms and antisocial behaviors (Tsuang & Lohr, 1994).

### **Etiology**

- Individuals with antisocial personality disorder have an earlier onset of alcohol use and a more rapid course to alcohol-related problems than alcoholic individuals without APD (Bukstein, Brent, & Kaminer, 1989).
- Intoxication with various substances leads to behavioral disinhibition, lowering the threshold for antisocial behavior (Lehman, 1996).

### **Symptom Presentation**

- Those with APD are more likely to become angry when using drugs (Fishbein & Reuland, 1994). They are also more likely to be HIV positive than those alcoholics without APD.
- They have higher rates of legal problems, social problems, homelessness, and mental health problems.

### **Assessment Issues**

- Identifying APD in substance using individuals is important for treatment placement because of this disorder's behavioral implications and because of its poor prognosis for treatment (Schuckit, 1989a).

### **Course of Treatment**

- Individuals who abuse alcohol and who have APD have poorer alcohol treatment outcomes than those without APD (Lehman, 1996).
- There may be two subgroups of APD substance abusing individuals - those with true psychopathic personalities and those with psychopathic behavior related to substance use (Gerstley et al., 1990). Those in the second subtype may respond better to substance abuse treatment than those in the first subtype (Gerstley, et al., 1990).
- Individuals with 'primary' APD disorders have poorer outcomes than primary alcoholics and drug abusers (Schuckit, 1985).
- In group settings, individuals with APD are more likely to incite staff conflict, to manipulate other treatment participants, to smuggle in drugs, to exhibit violent behavior, and are less likely to complete treatment. Many programs choose to restrict eligibility for individuals with APD due to their significant behavior problems and related demands placed on staff (Schuckit, 1989a).

- Adults with both AD/HD and substance use disorders have elevated rates of anxiety and mood disorders compared with adults who only have AD/HD (Wilens, et al., 1994).
- Alcoholics who report a large number of childhood hyperactivity symptoms are more likely to experience adverse physical and emotional effects related to use of alcohol (Alterman et al., 1982).
- This group has more pronounced social and family difficulties, and are more likely to display sociopathic personality characteristics (Alterman et al., 1985).

### **Assessment Issues**

- When assessing individuals with co-occurring AD/HD, clinicians should pay attention to common patterns and interactions of symptoms found in these individuals.
- Assessment should explore a pattern of AD/HD symptoms including inattention, impulsivity, and hyperactivity, as well as a childhood history of symptoms.

### **Course of Treatment**

- A childhood history of AD/HD is associated with higher rates of relapse among alcoholics (Glenn & Parsons, 1991).

## **Co-Occurring Antisocial Personality Disorder (APD)**

### **Prevalence**

Family genetic studies suggest an heritable risk of substance abuse in families with antisocial members (Bukstein, Brent, & Kaminer, 1989). Caudill et al. (1994) found that individuals with a parental history of drug or alcohol abuse were more likely to be diagnosed with antisocial personality disorder than those from families with no parental history of abuse. Lewis, Rice, and Helzer (1983), however, reported that a family history of alcoholism depended only on the presence of alcoholism, not antisocial personality disorder.

### **Drugs of Choice**

- Individuals with APD disorder are more likely to abuse cocaine than heroin (Flynn, et al., 1995).
- Psychopathy is highly related to marijuana intake, according to Fishbein and Reuland (1994).